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M.Co.

B. RUHL'S
BOOKBINDERY,
8th. bet. J & K,
SACRAMENTO.

VOLUME 24

IN THE SUPERIOR COURT,

State of California, County of Sacramento.

OCTOBER SESSION, 1881.

HON. JACKSON TEMPLE, - - - - - - - PRESIDING JUDGE.

WINFIELD J. DAVIS, OFFICIAL REPORTER.

SAMUEL OSBOURNE AND WILLIAM M. CUTTER, REPORTERS.

The People of the State of California,
vs.
The Gold Run Ditch and Mining Co.

COUNSEL:

For Plaintiff,

HON. A. L. HART, Attorney General, GEORGE CADWALADER, ISAAC S. BELCHER, A. L. RHODES, RICHARD BAYNE.

For Defendant,

J. K. BYRNE, W. C. BELCHER, S. M. WILSON, W. T. WALLACE, A. B. DIBBLE, A. P. CATLIN.

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The People of the State of California
vs.
The Golden Rule Ditch and Mining Company

Morning Session
Monday
Dec. 19/81

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Crawford J. Davis
Official Reporter

In the Superior Court of the State of California in and for the County of Sacramento

The People of the State of California
vs.
The Coe & Run Ditch and Mining Company

Morning Session
Monday
Dec. 19th/81

Testimony
of
John D. Hobson
recalled

Mr. Dibble Mr Hobson as I understand desires to correct his testimony given the other day

The Court Make your explanation

A. In answer to one of Gen Hart's questions as to whether there was any other cuts on the Iowa Hill pit on the North side other than that I explained as being done at the Door

6693

mine. My answer was intended to imply that there was no mining on the Main bank. I have noticed that some Chinese were engaged at cleaning bedrock but nothing else

The Court. Is that all?

A Yes.

Mr. Hart. I want to ask you a question or two in further cross-examination. Are there any mines South of Goes Run - not South of Goes Run but west of Goes Run along the banks of the North Fork of the American taking into the North Fork of the American on the Goes Run side?

A There are

Q What mines are those?

A I do not know their names.

Q How many are there?

A I have only noticed one at work, and that only by the material that was coming down the Canon opposite to me - that was for a short time

Q When did you notice that?

6694 A I think it was in the

Spring of 1879.

Q Where was that located?

A It was west of what was called the Coe Spring ranch.

Q How far from Coe Run?

A I could not say Exactly, but I think it was about a couple of miles

Q How far is it located from the banks of the North Fork of the American?

A Two or three miles. It must be 2 or 3 miles.

Q What stream does it tail into? A I do not know the name of the Canon

Q Does that Canon empty into the North Fork? A Yes.

Q About how extensive is the mining that has been done there?

A Since I have been there it has been very limited

Q But principally about that time? A I do not know

Q Did you notice the kind of work that had been done there?

A I did not. I had no way of seeing. I could see from

6695

a distance that there had been some little work done there.

Q You could merely see that mining was done there?

A For a short time, and after I noticed it, I noticed the water running colored coming from that mine

Q Coming down into the Monongahela?

A Yes. But what particular mine it came from, I could not say

Q Do you know what process they pursued in mining there?

A No sir, I do not

Q Whether it was the regular hydraulic process?

A I could not answer the question

Q Are there any other pits along the bank of the stream West of Coe Run?

A There is one about opposite Dowdell

Q How large is that pit?

A I could not tell the area of it

Q Well, about how large.
A Well, I judged from the distance it would appear to be an acre or two, I could not say positively as to that.
Q Was it a deep pit?
A It appears to be a shallow pit, I could look across from the blacksmiths shop at the mine through a levelling instrument and I could see there was a pit washed out there
Q Do you know who ran that pit? A I do not. It has not been mined since I lived at Iowa Hill
Q Do you know the name of it
A It is called the Eberhard Pit
Q. Do you know of any other pits along the bank of the stream? A I do not
Q You never have seen any others and do not know whether there are any others or not?
A I do not.
6697 Q What mine was this that

You spoke of in your explanation that was worked by Chinese?
A I do not know who owns the ground. It is on the Main North Iowa Hill Pit.
Q. You do not know who is running it?
A I do not
Q What process do they pursue there?
A They crevice the gravel out of the seams in the bed rock with picks and scrapers
Q And then wash it?
A And then wash it
Q They wash it in the Main North Fork?
A It finally goes into the main North Fork
Q Knowing that that mine been running?
A I could not tell. I have seen Chinamen crevicing in the bed rock there.
Q Do you know how much they have washed there?
A The amount must be very small. It is just from the crevicing in the rocks.
Q What do you mean by

very small ?
A a small amount.
Q What do yu mean by a small amount, do yu mean 200000 or 300000 yards ?
A No sir, I owned that that 200000 or 300000 cubic yards owned be a small amount of 10000 cubic yards owned be a small amount for several years.
Q Can yu make any estimate of the amount of cubic yards that they washed out then ?
A I can not
Mr Belcher I owned like to ask the Gentlemen, in regard to the admission, if they have examined it
Mr. Hart I received it but a few minutes ago. I will read it at noon
Mr Belcher It is important for us to know for the reason that several of the witnesses that we have already had on the stand and that we intended to call will testify to matters involved in the admission

Otherwise it will be necessary to recall some that have been on the stand

The Court. You will probably be able to tell by noon

Mr. Rhodes. I think we can, your Honor, at recess

Testimony of G. W. Colby

Called for defendant. Sworn

Mr. Dibble. Where do you reside?

A. At Dutch Flat

Q. When did you come to California? A. I arrived here in the Spring of 1850. I landed in San Francisco the 20th of May

Q. What has been your business since you came to the State, your principal business?

A. I have been principally Mining and Civil Engineering. I have engaged in some other

6706

pursuits.
Q Have you occupied a position as Deputy U. S. Surveyor?
A I have
Q. How long? A About 3 years
Q In what branch?
A In what branch?
Q Yes.?
Mr. Belcher What class of Surveying? A Mineral Surveying. I was appointed under General Rollins
Q State whether you have also been engaged in mining?
A Yes, I have
Q. Where did you first locate a mine? A The first days work at mining that I ever did in the State was done at Auburn and that was only one day and the next day I left Auburn and went to Illinoistown and from there to Mineral Bar, which is at Rice's bridge. And I arrived there in the latter part of May or the 1st of June
6701 1850

Mr. Cadwalader What time did you say you went to Mineral Bar? A Either the last days of May or the first of June. I think the last days of May in 1850

Mr. Dibble. Rices Bridge is on the North Fork of the American River is it not? A Yes

Q You started in there in the summer of 1850?

A In the spring of 1850 about the last of May.

Q In making a mining location what are necessary considerations? A It is necessary in the first place to have ground that will pay. It is necessary to have water to work that ground, and it is necessary to have a dump to dump the tailings on.

Q What do you mean by a dump? A I mean what has always been used by miners throughout the State, such as Flats, Ravines, Gulches, Cañons, and Rivers

6702 that are located very much

below the mine, and it is necessary they should be so located as to receive the tailings from the mine without obstruction

2 What do you mean by an outlet? A. It is an outlet that these various places across affords to the mining debris flowing from the mine, which has always prevailed in this State. It is necessary to have a dump low enough to receive the debris that flows from the mine.

2 Is that in respect what has been the usage?

A It has been the usage always — so far as I know throughout the State — It has always been the custom to dump into all streams and gulches and ravines and flats, where the flats were not owned by anybody.

2 That has been the universal custom all over the State?

A Yes.

6903 2 How long has that been the

universal custom all over the State?. A It has.
Q. How long has that custom existed in the State of California
Mr. Cadwalader I object to — Custom is a question of law
The Court. The name that he uses is immaterial. It would mean the same whether he said custom, or practice, or usage
A. It has been the custom since I arrived in this State from 1850 to the present time
Q And it has been the universal custom all over the State?
A Yes. It is considered the right that miners have, among miners.
Q Well sir, can miners work their mining claims — gravel claims — without a privilege of that character, of dumping wherever there is an outlet?
A It is impossible to work them without
Q How long did you remain at Rices Bar working in the river?. A I remained
6704 there 2 or 3 months and then

Came to Sacramento.

Q When did you come to Sacramento?

A About the 1st of September — the last of August, or the first of September I do not remember which

Q What was the condition of Sacramento when you came there?

Mr Hart. When was that?

Mr Dibble In 1850.

A It was a new place, a new town, started up Spring of 1849, but I do not know positively in regard to that but it was a flourishing business camp. It was the center from which every class of miners in the adjacent mining counties, produced their mining supplies.

Q It was a mining supply camp, do I understand you?

A Yes. That was the business that was done here at that time

Q How long did you remain here at Sacramento at that time.

A I remained here 2 or 3 months, up to pretty late in

6705

the Case

Q. How many people were in Sacramento at that time Enjoying the Business of furnishing Mining Supplies, as a Mining Center?

Mr. Hart. Subject to that as immaterial

Mr Debble What was the Population of Sacramento at that time?

A I should think about 10000 inhabitants. About 10000 I should think would be a fair estimate, it was a large place, and a very busy place in those days.

Q During that time state whether there were any ships, that came to Sacramento, and in the Sacramento River, and if so, how many, and the Character of them, and the rig of them, and the Cargo of them?

A There was some ships here during the time I was here. Some arrived here during that time, some Sea-going vessels, but they were of the Smallest class of Sea-going vessels

6705

such as barks, brigs, schooners, and sloops — principally schooners. As far as my knowledge goes and I believe I am correct in it, there was no such thing as a first class sea going vessel, I mean a square rigged ship in that port. Some small sized steamers were there — The Senator, The New World, The Red Hunter, and The McKim afterwards came there a few times. But the steamers generally were of that class known as river steamers. A great many schooners came up the river at that time and landed a great deal of freight there, a great deal of miners supplies. The trade of the river was of that character.

Q Where did they anchor?

A In front of the City here

Q How many of them at any one time? A. Well, that is pretty hard to estimate, I should judge 8 or 10

6707 Q What was the character

of the cargoes. 2.

A They bought either from the East or from San Francisco those supplies that were distributed from the point - Miners supplies.

2 What supplies?

A Mining supplies.

2 State furthermore if you had occasion during the time you were in Sacramento in 1850 to Examine the American River, and if you did, what was its condition as to banks, depth and color of water, and bottom?

A During the time I remained here in 1850 I used to go out to the American river usually on Sunday and take a bath in the American River. I knew the river very well, here, near the crossing where the old road crossed & go from here to Auburn, Bars Valley in Nevada. I can not determine the exact point now but it was near the City here. The character of the river at that time, was a stream not perfectly clean, but can-

rying some debris, slightly roily, much clearer than it is now. The bottom of the river was a sandy bottom. The banks were rather bluff banks about 15 feet high and composed principally of sand. It is what we would term perhaps an alluvial soil, made principally of sand. That was the character of the banks and of the river

Q Describe where the farms were around Sacramento on the American river at that time? A I did not see any. There were no farms here in those days

Q No farms here at that time? A Nosir

Q Did you have occasion at that time to visit the American river did you have occasion to go to the American river, and examine the bottom lands, and to see whether there was any farming going on, on the bottom lands, in those years? A I did

Q Was there any farming there? A. I did not see any –

Q Would you have seen it if there had been any? A. The first grain I saw raised in this State was in 1854 – Q. In 1854? A Yes.

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Q Where did you cross the American river in going towards Auburn in 1850 for instance?

A I should think it was below where the railroad now crosses it. I am not certain as to the point. The face of the country has changed materially and I do not know as I could locate the exact point. It is where the old road ~~the~~ earliest road led to Auburn from Valley and Nevada.

Q Was that known in old times as the Auburn Crossing

A I think afterwards Lisle's bridge was erected near that road

Q Was that known as Auburn Crossing at that time? A Yes

Q When you were here in 1850 state if you saw any evidences of high floods?

A I did. The City had been overflowed the year before in 1849-50 they had a very

high flood here. The flood was generally known here and talked about and I saw evidences of the City having been submerged by the flood. I saw flood wood in different places and the whole City I should say had been covered except a small place near the plaza. There was a small place there that was above high water. You could see the line of the flood wood or debris that the flood makes along the soil. It showed to me that a small place there was out of water. The balance was all submerged I judge. I saw also between here and the American River evidences of a high flood having brought sand onto the soil. There was quite a coating of sand on nearly all the bottom land between

here and the American River apparently brought on by the flood

Q With reference to the trees did you see any evidences of high flood, any deposits?

A I think near the river the high water mark showed itself on the trees and the undergrowth and willows that stood up quite high For instance there would be some flood wood, what we called flood wood lodged in the trees, - evidences of high water

Q State if you remember a place called Hoboken?

A Hoboken, I do. I never was at that place, but knew of it

Q Do you know why it was built up at that time, why they went there?

A At that time I was interested with another party in selling miner's supplies at Rattlesnake Bar on the

American River and cured our goods here. He run a team here and I sold the goods up there. I used to sell some of the goods nights and morning when I would not be mining And I know that he went to Stoboken instead of Sacramento on account of the high water and on account of Sacramento being flooded

Q On account of Sacramento being flooded? A Yes. And the team was run to Stoboken instead of Sacramento and the goods were procured there instead of in Sacramento on that account

Q How much more elevated was the ground at Stoboken than at Sacramento?

A I cannot say

Q You simply know they went up there because they had to leave here?

A Yes.

Q And from there the miners were supplied?

A Yes.

Q When you left Sacramento City where did you go? A I went to Rattlesnake Bar on the main North fork of the American river

Q What business did you engage in there? A I engaged in mining; afterwards in connection with that I had occasion to do some work at engineering; running ditches; and during the time I was there, I commenced the practice of engineering, surveying ditches and flumes, the grade for flumes, grading tunnels and work of that kind, surveying mining claims. I did a good deal of that during this time in 1852, but I was engaged in mining all the time besides, while I lived there

Q How long were you engaged after you went to Rattlesnake Bar surveying mineing and running ditches? A I lived there from the Fall of 1850 upto 1856

Q You remember of any ditches specially that you surveyed at that time?

A I do

Q State it? A The first ditch that I ever surveyed was one that I was a part owner in from Mormon Creek to Rattlesnake Bar. That was in 1853. I afterwards helped make a survey for the American Rive. ditch and I done a large share of the work myself but a portion of it was done by W. A. Chisen and myself. I was one of the first Directors of the Company I helped get it up and helped make the preliminary surveys

Mr Cadwalader Q What ditch

was that? A The ditch formerly known as the North Fork ditch. It was then known as the American River Water & Mining Co.

Mr Dibble Q From the Fall of 1850 to 1856 how many miners were working on the American rivers on the North branch? A It is pretty hard to answer that. I was pretty well acquainted with the American river and the forks. My estimate is that 20 000 men were working on the American Riv. and its tributaries

Q 20 000? A Yes

Q At what time?

A From 1851 to 1855

Q What kind of mining were they doing on the American River and its tributaries?

A They were mining in the bed of the river and on the banks and bars adjacent to it.

Q Where did you get your

supplies? A From Sacramento.

Q What kind of mining was it? A In the earlier part. In the earlier years the work was principally confined to rockers. For instance in 1850 hardly any other operation was known. The mining was principally by using the rocker. Along in 1851 they began to use what is known as "Long Toms" and along about 1852 or 1853 they commenced to ground sluice, through flumes or boxes by running the water over the banks and caving the banks, what is known as ground sluicing. That was the ordinary method up to about 1854 and then the first hydraulicking I ever saw operated was in 1854 and from that time on it changed from ground sluicing, running the water over the banks to the hydraulic system. The

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hydraulic system became introduced and along in 1856 that was the general system of mining as far as my observation went

Q Where with reference to the ribbon of the channel was the first mining done?

A On its banks along the river and in the bars right close to the water

Q Where next? A As they worked them out they would go into the higher benches higher up from the river and finally they got into the benches some distance above the river.

Q How many days in the year would these 20 or men work?

A Well in those days they worked all the time unless there was some severer storm. I suppose 300 days in the year would be a fair estimate

Q They worked every day in the year? A Usually

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Q They were not very particular about Sunday? A Not very particular although miners worked frequently Sundays and sometimes they did not I estimate that a fair average in that time would be 300 days of the year.

Q State what became of the material that these 25000 — 20 or 25 thousand men washed out?

A The ordinary method of working was to work on the bar — pick it up with a pick and shovel — with a pick first to loosen it and then the heavy boulders and large cobbles were thrown behind. They were piled up on the bars and the fine material was taken to the edge of the river and washed and dumped into the river.

Q Now in speaking of the 20 or 25 000 people working on the river and in the river bars and benches, what

other kind of work was being done besides that in the gulches and streams, the ravines and placeres and other places? A They were mining in a similar manner during the earlier days in all the gulches and ravines all over the Country drained by the North fork of the American River as well as other portions of the State. The character was the same kind in the early days They always threw aside the rocks and washed the fine material

Q Where did those people who were engaged in mining in the ravines, gulches and placers obtain their supplies in those years?

A Through Placer, Nevada and El Dorado Counties their supplies were obtained here in Sacramento

Q Where did you next mine.

A My next mining was

done at Moore's Flat Nevada County. I went there in the Fall of 1856

Q What kind of mining was done there? A Hydraulic mining

Q How many hydraulic mines were working in 1856 in Moore's Flat and vicinity?

A I think about 20 hydraulic mines were running at Moore's Flat. I think there were all of that many claims and I think they were all hydraulic mines and I should estimate about 10 at Orleans Flat and about 10 at Wolsey's Flat making some 35 or 40 altogether

Q Right in that immediate vicinity? A At those three points

Q From your observation how long had those hydraulic mines been working up to the time you went there?

A They were in full blast at the time I went there

in the Fall of 1856. I judge they had been opened a year or two prior to that time

Q Explain the pressure and the amount of water used at Moore's Flat and in the surrounding mining camps? A The ordinary head in those times was from 100 to 300 inches of water. The pressure was about — it ranged say from 100 to 200 feet high

Q Where did the material flow to that was mined in 1856 and for a couple of years before that? A It either flowed directly into the middle Yuba or into the Cañons that went into the middle Yuba

Q State whether the middle Yuba is an effluent of the Sacramento River? A Yes.

Q It leads into it? A Yes

Q How many men were engaged in mining at that time at Moore's Flat?

A At Moore's flat and in that vicinity I should estimate the population, mining population to be about 5000.

Q About 5000? A yes.

Q What was the business of the 5000 people who were ~~working~~ here in 1856?

A A large majority of them were mining

Q Men women and children or do you refer to miners alone? A well they were miners, some merchants some blacksmiths, but principally miners

Q 1856 when you were at Moore's flat and there were some forty odd hydraulic mines running was there any other method by which that ground could be worked except by heavy pressure of water? A No other practical method

Q How long did you remain there mining? A About 2 years and a half

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Q Describe the character of the hydraulic mines at Moore's flat and the camps you mentioned as you found them in 1856? A The character of the mines, do I understand you?

Q The character of the mines with reference to the banks and the character of the deposits? A The deposits were similar to the deposit of the blue lead up here— coarse material on the bottom overcapped & covered by fine material all carrying gold from the top to the bottom unless there was perhaps some pipe clay. There was not pay in that Sometimes in the top washings there would be pipe clay. The miners never considered the pipe clay of any value so far as gold was concerned the bottom was of a very heavy material — I think heavier there than in the

blue lead up here at Gold Run

Q There has been something paid in this case about channels covered with mount ain lava and channel in which the gravel comes to crest. Explain it what it means.

Mr Hart What is the object of this testimony?

Mr Dibble To show the necessity of drift mining in one case and hydraulic mining in the other.

A The original rivers channels that run through the mountains in California — those old rivers channels that run through the mountains in California there are evidences of their having been cut off by the streams and the streams are very much lower varying from 500 to 1500 feet below the old rivers channel and in many places in the mountains the old channels run right across the present

rivers. They worked up from the beds of the streams in the gulches dugs usually by tracing up a rich ravine and these old channels were struck by tracing up rich runnes and rich deposits until they worked into the old river channel where it came out of the hill / Oftentimes on the ridge between it is over capped by a lava flow although the channel runs right straight through. An immense depth of lava on the ridge oftentimes overcaps the old ancient river bed.

Q What effect has the lava covering upon the mining in the channel? What effect has the lava covering on the work in the channel, the character of the mining?

A In what respect do you mean

< Objected to; question withdrawn >

726 Q Where did you next go?

A I next went to Nevada City and for the next 12 years engaged in other pursuits

Q How early did you become acquainted with the Northern forks of the American River at and above Rice's bridge?

A In 1850

Q State whether you examined at that time the river and its bed from Rice's bridge up to Cañon Creek?

A I was frequently along that river about as high as Canon Creek. I never went quite as high I think I think I went up to Pickerings Bar.

Q Describe the channel and the bed of the river at that time? A It was a very deep mountain Cañon lying very low, rather light grade, a narrow stream and with very bluff mountains on each side the mountains will average about on an angle of 45 degrees

727 the slope is about 45 degrees

of those mountains as a general thing. The river is a flat narrow stream running very deep down, it was 1600 feet from the top of the ridge down to the stream. It was a rocky stream filled with gravel, very course material and narrow

Q Have you examined the river between those points lately, and if so when?

A I examined the river about 7 weeks ago, I do not know exactly, but about 7 weeks ago. I examined all of the river, or nearly all of it between Canon Creek from Pickerings Bar down ~~——~~ I examined it — to Rice's Bridge I mean

Q Did you examine with reference to the tailings impounded in that distance?

A yes sir

Mr Macdonald. Q From Canon Creek to Pickerings' Bar?

A From Pickerings Bar to Rices Bridge.

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Mr Dibble Q what did you find to be the character of the debris so impounded?

A The character of the debris commencing at Pickering Bar is gravel similar to the original gravel in the American river. You cannot tell the difference between the deposit there now and the old river gravel, the old deposit that was in the river in early times as far as quality is concerned, commencing at Pickering's Bar it is very coarse, the material is very heavy, large boulders and cobbles and as you go down the stream it gets finer the further you go. The material, the rocks in size diminish regularly until you get down to where the materials are dumped in from Dwa Hill then apparently comes in another dump, a deposit of heavy material and there the rocks at that point, the material has

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tapered down so that it is nothing but fine gravel and some sand left which appears to be absorbed and taken up in another dump of coarser material and that diminishes in size as you follow down the stream until you come to the next place where tunnels have deposited. There the same law prevails there until you get down to the Cañon right above Rice's bridge, everything has diminished in size until there is nothing but fine pebbles and some sand in the stream and there has been a large deposit of river gravel, 3 large pits, 2 on the East side and one on the West, been dumped in there again but the dumps there are different in character from what they are above

Mr Cadwalader Q You are above Rice's Bridge are you?

Ans Yes sir

Mr Dibble He is just getting there. So on.

A The material that has been dumped in is heavy. A great deal of the rock has been piled up on the bank but there has been sufficient put in there to apparently raise the river bed, I judge, about 3 feet. I should judge that is about the amount, all along by Rices bridge I should think there was about 3 feet that apparently comes from these deposits from the banks, the large pits that are adjacent to it. They have filled up there till you lose all the traces of the last dump above in that deposit. It changes somewhat there from the dumps above

Q What is the depth, mean width and length as you measured it.

Mr Cadwalader That is 7 years ago.

Mr Dibble That is 7 weeks ago.

A 7 weeks ago. The average mean width was 140 feet

The Court From Pickerings' Bar to Rices' Bridge?

Acres sir, or which equals 47 yards or there abouts

Mr Dibble Q what depth?

A The average depth is 46.2 feet or 15.4 yards

Q What length? A The length is 41,918 feet or 13 973 yards

Q And the contents?

A I reduced it to yards in order to compute the contents, the contents are 10,113,657 cubic yards

Q That was the estimate that you made at the time you were there 7 weeks ago, or about 7 weeks ago? A About 7 weeks ago

Q State how the estimate that you made and the estimate that Mr Union made agree with reference to the mean average, width & length

A The agree as to the mean

width but not as to the mean depth. She makes the mean depth 42 feet and I make it 10 per cent greater which is 46.2

Mr Hart I move to strike that out in reference to Wren's estimate, on the ground that the estimate itself has been stricken out and that his testimony in relation to Wren's estimate is incompetent

The Court As to what Wren said about the depth would be incompetent.

Mr Cadwalader It might confuse the record because there might be another Wren — it might seem as if there were two of them

The Court Let that part as to the depth go out

Mr Dibble She was to go with Wren and make a measurement of the ground but he was unable to go that day and went a day or two afterwards but Mr Wren

presented him his estimates as to the depths, the lengths the widths and all that and he took them alongwith him as given by Mr Wren

The Court He can say whether he got the lengths. It is only about they speak of

Mr Dibble & I will ask him a question as to the understanding between him and Wren as to going to the ground and making the measurements, when he went to the ground whether he took the measurements with him

Mr Stark I object to any understanding between this Witness and Wren

The Court That is as to Wren's estimate of the length of the rives and the depth was the question

Mr Dibble Yes sir

A I have compared Wren's estimates with my own and that is the result. I think that his average widths are

correct. They agree with mine
they agree with my observations,
I am satisfied that it is
correct or about so.

The Court I do not suppose
that is what you want:
You want to know whether he
took the same width and
length

Mr Dibble Did you have
new estimate of width with
at the time? A No sir I
did not. I compared them
afterwards

Q You compared them after
you returned? A Yes sir

The Court You have got the
new figures here in record

A I compared them after
wards and I was satisfied
they were about right — we
agreed in it

Mr Dibble Then I understand
you, you make the deposit
10,113,657 cubic yards
between Rice's bridge up?

A Yes sir

Q To the head of Pickering's

Bar? A Yes sir

Q How far is the head of Pickerings Bar from Cañon Creek inlet To the inlet?

A I judge it is about half a mile. I do not know the distance

Q Describe that bar with reference to its formation — Pickering's Bar? A It is a large gravel bar

Q How formed?

Mr Cadwalader Of what material I suppose?

A It is composed of very heavy, coarse material boulders and cobbles, large boulders and large cobbles.

Q Returning to the question I asked you a moment ago, on what did you base your calculation of 46.2 feet being the depth in the North fork of the American river above Rice's bridge to the head of Pickerings Bar?

A I base it from my observation of the stream as I knew it in

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1850 and also by taking the high water line and making an estimate as to the depth and comparing it with that. Now the high water line a majority of the way is away below the top of the fillings now & the top of the deposit. I see a high water line, a recent one made there but the original high water line is very, very deep along down by Ford's Bar and it shows itself the first place that I found it was near Stephen's bridge and by comparing the descent as I went down the stream of the top of the bed as it descended from this high water mark, I judged somewhat of the amount that was filled above it above — I made my estimates as I went along and base them, as far as the high water marks were concerned was by comparison

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Q Then I understand, you base your 46 feet depth on actual knowledge obtained in 1850 as to the stream?

Mr Cadwalader We object to that as an assumption and as leading and a repetition of what the Witness had previously stated

The Court It seems to be suggestive, a little

Mr Dibble I think he has answered the question very well any way; he has stated it was from his positive knowledge, at Rice's bridge and from that point above state, whether, especially at Rice's bridge, there is very heavy working of a mine there, if so state the character of it

<Objected to as leading>

The Court It seems to be leading. She has stated about two pits on one side and one on the other just above Rice's bridge? A There

is just above Rice's bridge on the Porter side of the river a very large excavation; also right below Rice's bridge, right close to it on the same side and also on the opposite side immediately above and below, the three principal pits that I spoke of, one of them is below Rice's bridge right immediately below it on the South side, the biggest of them all is on the South side up some little distance above Rice's bridge where the river comes out of the Cañon — there are two very large excavations, a great many cubic yards have been taken out there

Mr Dixon Q What was the character of that excavated matter?

A It was a very heavy material, the same as the river wash, the original river wash. It is nothing but a high bar that is what it is

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Mr Cadwalader Just a bar?

A A very high bar laying some distance up the river

Mr Dibble O Stow much, if you have estimated, has been washed out of that point and when was it washed out?

A I have made no estimate as to the number of yards I know it is a very large excavation. I should judge—

Mr Cadwalader I object to that as a mere estimate

Mr Dibble Go on and make your estimate unless the Court stops you

A I should judge it would cover a space of 2 or 3 acres probably on an average of 20 feet deep perhaps 30 — 20 on the one side and 25 on the other would perhaps be nearer and in extent would run — it might go anywhere from 2 to 4 acres

O Stave you examined the Gold Run mines, if so how often?

A I have

Q Have you examined the mines with reference to the top wash and the amount thereof? A I have, and made estimates of it

Q Give your estimate as to the depth and width of the top wash and also as to the length? A <Referring> I make the average length to be 13000 feet, the average width to be 2000 feet and the average depth 75 feet making a total of 72,222,222 cubic yards, that is the top wash what is known as the first stope that was taken off

Q Have you estimated the width, depth and length of the pay ribbon of the channel to be worked? A I have

Q State it; the length, mean width and depth

A The length of it 10,560 feet, which is 2 miles; the average width is 133⅓ yards That is I estimated that it was 200 feet on the bottom

and 600 feet in the top

Q What does that make it? A It makes it 133⅓ yards or 400 feet

Mr Broadwater Q What is the width? A It is 400 feet In yards it is 133⅓ yards

Q Now what is the depth? A 120 feet or 40 yards

Mr Dibble Q State the contents A 18,773,333 cubic yards

Mr Hart That is to be washed?

Mr Dibble Yes sir to be washed.

Q Have you estimated how many years it would take to wash that amount of material with the use of the water that is being used there? A I have not estimated the probable time

Q Are you sufficiently acquainted with the North fork of the American river and the American river to determine its storage capacity for tailings above Folsom?

A I think I am

6742 Q What then is the storage

capacity of the North fork of the American river and the American river above Folsom.

Mr Cadwalader. We object to that. That brings before the Court this dam question. It could have no other relevancy.

Mr Dibble. I do not intend to lead to it or ask any question about it.

Mr Cadwalader. I suppose the storage capacity would depend upon the height of the construction that could be put up. The storage capacity might be as high as the higher deposit or lower.

The Court. I suppose it is upon the theory that the dams will stay there without any dams at all.

Mr Dibble. Of the material that is there now.

Mr Cadwalader. That would be immaterial. We should not be compelled to take any

chances in a mere theory

The Court I suppose they have a right to submit their theory. The question is how much storage capacity there is in this water course. I cannot see that it would have any relevancy on your theory but on their theory of facts it would have. I think I will hear what he has to say about that.

<Question repeated>

A This estimate is based on —

Mr Woodward does he advise the Court that this leads right on to the dam question

Mr Dibble I have advised the Court that I will not ask any questions about a dam

The Court I do not see that it necessarily will, but of course it might lead there but it may not. I suppose the idea which they have attempted to advance all the time is that this heavy

material and stones would stay in the river and will not wash out at all. You say it will. The question is whether they cannot present their view of the matter, that is all that there is involved in this

Mr Cadwalader Your Honor will see in about 3 minutes.

A This estimate is based upon the proposition that this deposit will be from the blue lead such as is left at Gold Run. The capacity from there to Folsom tapering at a point to Folsom with no depth at Folsom and raising in the North fork at Cañon Creek 900 feet high, which will not bring it within 100 feet of the height of Bear River right opposite this point right over the ridge there in elevation, the stowage capacity is 3,458,400 000 cubic yards

6744 O State whether that stowage

Capacity is based upon the Character of the material now being worked and that has been worked in the Gold Run Mine for the last 5 years.

A It is, as well as other localities, worked in similar material. For instance in Bear River, which would have more grade than the North Fork would if filled to that extent; this heavy material does lay and stay there to my knowledge

Q Now go on and explain Mr Loadwalades I move to strike that out as not responsive to the question: to wit, his testimony in relation to the Character of the material

Mr Dibble It is all responsive to my question as to the Character of the material, He has mentioned Bear River and I propose to show by the witness that he has examined Bear River and knows of what he speaks

The Court I suppose what he paid about Bear River is not responsive

A I understood the question to embrace that or I should not have answered it in that way. I understood the question that you asked me was: on what I based my calculations

Mr Dibble Q To what extent does this material that you refer to coming from the Ford Run mines vary from the material deposited by the Dutch Flat mines in Bear River? A It is similar

Q State to what extent it is similar and to what extent it has the same effect in filling and staying in the river

Mr Wadsworth I object to that as calling for an opinion and not the facts.

The Court State the respects in which the material worked is similar? A The

material is the same, the same kind of material dumped into Bear River stays there and withstands floods and it makes dams and holds back everything that comes down the river above it — dams it up and impounds it

Mr Dibble That is what it does in Bear River? Explain what you mean by saying it makes dams? A For instance the Polar Star, working at Dutch Flat have made a very extensive excavation and have dumped a very large quantity of that heavy material into Bear River in a very narrow gorge in Bear River. It has made a dam there that is 100 feet high and more too that stands there during the floods and stays there and does not wash out and a constant flood, a very large

pond is made in the river above which corrals every thing that comes in the river from the mines above

Q Speaking of the Polar Star dam what is the inclination of the crest of it, the highest point of it?

A I should say — I mean on the lower side

Q Yes sir?

A Sapeing down stream I should say that it descended on angle of about 10 to 20 degrees depressed from the horizon

2. Now state the character of the material in Goose Run remaining to be worked out?

A The character of the material is a mass of rock, boulders, cobbles and fine gravel, with the rock packed as closely, about as closely as they will lay together and the interstices filled up with gravel and sand. The whole mass of the bottom is cemented together, and when I speak of cement, I mean this mass of cobble and rock existing in that bank all cemented, not a vein bed of cement, I have heard it spoken of a great many times as so much cement, and I wish to be understood, that in describing the bottom, that this mass is cemented together, that there is no such a thing as cement itself, pure cement. The cobbles are sort of ellipsoid in shape that is they are longer than they are wide, they are wider than they are thick, a sort of

flattish ovoal shape. This represents a fair sample of the bottom boulders and rocks of that deposit. These are packed pretty nearly as close together as they could lay, and the interstices are filled up with finer gravel, where it will admit of rocks that is chunked in about as close as you can pack it and from that down to sand very near, the finest interstices are filled with sand. That is about the character of the deposit. It is in color pretty nearly slate, although commonly called the blue lead although the color of it resembles the original coast in the North Fork of the American River, the rock material is principally slate; in the bottom strata slate predominates, while in the top strata quartz predominates. The bottom material has the color of the original wash apparently just about the same color as the original bed of the American

River, in places that I have mined it, and the character of the material when dumped into the American River is the same

Q. Thought what distance?

A The cobbles and rocks - the size of the rocks in the blue lead vary from rocks that weigh ten down to cobbles and from that down to fine gravel say an inch in diameter.

Q In what proportion is it rocks, cobbles, boneder stones and sand?

A I estimate that the rock material, from pebbles an inch in diameter up to the largest boneders that exist there make about 75 or 80 per cent of the entire mass of material, I should set it at 80 percent.

Mr Caldwalader 75 or 80 per cent.

A Yes sir, the balance is finer pebbles, finer gravel down to one of an inch in diameter, tapering down till finally it ends in sand, I guess of the gravel about 10 per cent, and of the sand about 10 per cent of the

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fine material.

2. Calling Pickering's Bar the dump, to what distance on the material which you have described go before to Reed Bridge or to the Town Hill dump

Mr. Cadwalader I object to that as embodying a physical untruth.

Mr. Dibble Where is the dump — where does the dump commence?

A At Pickering's Bar.

Mr. Cadwalader Ask him whether he has seen the dump

Mr. Dibble I will take my own course — answer the question unless the Court directs to the contrary

The Court If you know of your own observation, state it.

A. It commences about Pickering Bar — the dump — and extends down the river from there, the last traces of the Reed Run dump are lost when you come to the first dump from Town Hill.

2 Where is the Town Hill dump?

Mr. Cadwalader Object to that.
He has gone into that once
Mr. Dibble I have not asked him
about Dowd Hill yet.
A. It is about 3 miles I think
I think below Pickering's Bend, 4
mile perhaps — 3 or 4 miles
Q. What portion of the material
that you have described coming
from the Goes Run mines, can
pass the Dowd Hill Dam?
A. What percent? I do not
think any can pass unless some
sand — there may be one per
cent passes it, or two per cent.
Q. How long has that been the
case in mining at the Goes Run
mines, how many years?
A. Since they commenced to work
in the Alma lead
Q. About how long is that?
A. It is about 5 or 6 years, that
about 1875.
Q. State whether or you pass
from below the present surface
of the material there it becomes
harder and harder until you
get down to bed rock?

A In the river?
Q In the river?
A In the river.
Q Whether that be or be not the rule? A. The bottom is cemented I should judge much harder than it is up to the top, it varies in depth the cemented part from 60 to 100 feet deep, and I should say irregular, some places higher and some places not so high — I should judge that about 80 feet would be a fair average of the depth that is cemented. The gravel on top of that is of about the same coarseness of material, but not cemented together, all of it — some places it is and some places it is not
Q You have estimated that not more than one or two per cent comes from the Iowa Hill dump, and that the Iowa Hill dump was three miles below the head of Pickens Bar. How far from the Iowa Hill dump, is it to Rees Bridge?

A It is about 4 mile – 4 or 5 miles.

2. How far do you say?

A Some 4 or 5 miles. I do not know exactly

2 What proportion of the material that has been worked out of the Deer Run Mines in the last five years, and hereafter to be worked out, can by possibility get down to Reis Bridge

Mr. Cadwalader I object to that as leading and suggestive

Mr. Dibble I have not lead him, to a single answer. I do not know what the answer will be myself

The Court. I do not think it is suggestive

Mr. Cadwalader Whether they can be possibly –

Mr Dibble. I will drop the word "can."

A. The material passing the Town Hill dump, that might go down to Reis Bridge I should say from one to two percent would all that come from there.

2 How far is Reis Bridge

from Sacramento by the American River. A It is 70 or 75 miles I judge, about 70 miles

2 What is the character of the material remaining in the mine with reference to the character of the material that was washed from the mine up to 1874-5?

A The material in the mine now, has been stripped of this fine strata that originally existed on top. It is the blue lead that remains, that portion that has the appearance of an original river bed, heavy coarse material and the material remaining, the predominant character of the rock is slate while the original bank that is washed off from the top, quartz pebbles, predominate, it was fine in character, containing a good deal of soil and an immense stratum of what miners usually term pipe clay, it is really sand somewhat cemented, just cemented enough so that when it caves, it breaks

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up in large masses instead of pulverizing, it comes down in large blocks. In the top there, there was one stratum I judge to be 50 feet thick of pure material of that kind.

Mr. Cadwaladen That is pipe clay?

A It is what miners usually term pipe clay, but is not strict pipe clay, there is an article known as real pipe clay which is a soft sticky substance, what is known as the pipe clay there is fine sand cemented a little, enough to hold it together

Mr. Dibble Proceed with your explanation

A. The amount is made up of that kind of material, very fine rocks, pebbles, and some earthy material. I estimate that the sand portion of it, is about 80 per cent, the balance was fine gravel, fine quartz rocks

Q How much more of the top deposit was transported, if you know, by an inch of

water than can be transported by an inch of water, of the bottom deposit?

A I know a great deal more can, but just how much more comes be pretty hard to tell.

2 Approximate?

A As an approximation I would say for 3 or 4 yards more, the top material is moved by water much easier than the bottom itself. Every hydraulic miner knows this, if he has got 100 yards of the bottom material blasted out and pulverized by powder, that he can wash that off in a great deal less time with the same amount of water and the same grade of sluice, if he had 100 yards more of the top material to run with it; and 200 yards would be an advantage in running it away on account of it's moving so much more readily by the action of water; you can wash the 200 yards mixed, easier than you could coal

100 yards of the bottom Material alone, that is is less than with the same head of water and the same grade

2 What would be the Comparative difference between the Effect of 6000 or 7000 inches of water in the old Mining on the Cob ground, and say 2000 inches of water on the bottom ground?

A 2000 Inches on the bottom and 6000 on the top?

2. Six or seven thousand inches on the top with the grade then in use and with 2000 inches on the bottom Material with the grade now in use?

A It would be a great deal more

2 Approximate?

A I should say ten times as much, perhaps a great deal more, twenty times as much would come nearer to it I should judge, with 6000 inches on top as compared with the grade they had there, and 2000 inches on the bottom with the grade that

is now in use

Q Explain why?

A. I think that about 20 times as much would be a fair estimate of it, because the grade now in use is about ½ what it was when they worked this top ground which makes a very material difference in the amount of gravel that can be washed either top or bottom. The the top was not cemented, it could be piped easily, could be washed readily, and a flume could be made to carry just — the dirt could be procured so as to keep a flume full, running with its utmost capacity all the time; then, it yields to the action of water very much easier than the bottom. As an illustration of this — If you like it, I can demonstrate it perhaps better

Q Soon?

A. But to take the gravel that was worked originally in the beds of the streams, say by these 20000.

Men that worked in Coney days
on the American River, sorting out
the rocks and sifting the
fine material into the stream,
the dumps, the matter washed
was of a very fine character
and the entire amount went
into the stream, it stayed
in the stream without going
down very much until the
hydraulic mines got into the
top dirt. They then worked
from 1850 up to 1861 in the
top ground which was of fine
material and contained what
is generally known as Slickens;
that was dumped in on top
of the fine gravel that had
been put in for ten or twelve
million yards per year from
1851 to 1857 which caused
a very large amount — then
the very large amount of the
material from the top was
put in the river and then
the immense flood of 1861
which was unprecedented, such
a flood was never known before

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now has not been since, and swept out these streams, it not only took the bed gravel out but took all that fine material out of the mountain gorges above and brought it down to where the grade was less but it lodged along the foot hills, in the streams and in the valleys on account of the less grade, and has been coming down ever since, working down as high waters came

2 What comes be the effect of the use of the 6000 or 7000 inches of water used in early times in the Goss Run mines, if applied upon the bottom material now remaining in the Goss Run Mines?

A They owned coal very much more, than they do now. perhaps I do not understand your question.

2 I mean what comes be the effect of applying 6000 or 7000 inches of water of itself alone to the bottom

material remaining in the mine.

A. As it was applied originally when the top wash went off?

Q. I mean as it now is, the bottom material, would it move it at all, without blasting?

A. Simply by applying it under hydraulic pressure on the bottom would have no particular effect on it

Q It would have no effect at all? A Nosir, the bottom can not be washed by water without it is first blasted. It has to be pulverized in order to have water have any effect at all on it, that is of any amount

Q. Then I understand you applying the 6000 or 7000 inches of water on the banks of the channel in olden time will carry it off and now this 6000 or 7000 inches would have no effect at all on the bottom?

A. The difference is, in this

In the original washing about two men owned run a claim, a hydraulic mine, where now it takes 20.

Q What causes that?

A Because they owned pipe, do all the work at the top wash with the water, while at the bottom they can not do anything without running powder drifts in the bed-rock by the use of giant powder and running a drift 4 feet high and about 2 feet wide until you get in 50 or 60 feet. and then running Js and putting in Chambers and depositing 100, or 200 to a thousand Kegs of powder and tamp it and put it off and that pulverizes the ground, and then water will wash it off

Q. Well, Even after powder has been applied to it, what then — are they compelled to do in order to make the water Effective upon it, do they have to break it up?

A If it is not entirely pulverized, if it comes out in pieces like that (referring) - if such are left they have to be broken up by hand

Q. By hammering?

A Yes sir, sometimes the heavier pieces the larger pieces are again broken by powder, by using giant powder and putting it in the masses of it that were not thoroughly pulverized by the main blast

Q How large are the largest bunches that are thrown out by blasts in this hard material?

A Sometimes bunches are thrown out, half as big as this room - all sizes

Q When they are thrown out of that character, what do they have to do then before they apply the water?

A If it comes out in large masses it has to be re-blasted, and then the balance broken up by hand

Q. Sledge in hand? A Yes sir

Q What is the rock formation in the Soda Run section?

A Principally slate, composed of slate, there are some trap in that vicinity and some porphyry and some quartz, but principally slate, some serpentine rock in that vicinity and above there

Q. In going up the North Fork of the American River where does the line of the granite belt crop it?

A It crosses the American river between Rattlesnake Bar and Negro Bar.

Q What is the formation above that point? A It is a slate formation.

Mr Caldwalader Nowhere.

a Clear to Soda Run

Mr. Dibble What is that below that point down to Folsom? A It is principally granite, all granite I think, that is a general thing. There may be some little streaks and strata of some-

thing else.

2. From what source does mica usually come?

A It comes from granite, that is my observation of it.

2 What is the difference in Elevation in Bean River and the North Fork of the American River, taking the point of observation at the mouth of Cañon Creek and the American river?

A It is about 1000 feet, the North Fork is about 1000 feet lower than Bean River at the mouth of Cañon Creek right across the ridge there.

Mr. Cadwalader That is a cross-section there?

A Yes sir.

2 Going to Cañon Creek?

A From the mouth of Cañon Creek to a point as near opposite as you can get. It is about 1000 feet lower than Bean River.

Mr. Dibble What is the character of the land in the

Goe Run mines with reference to mica? A Never saw any mica in the sand from the Goe Run mines

2 If there had been mica there from your Examination would you have seen it?

A I would have been likely to have seen it, if the mica had existed there to any considerable extent, I would not fail to have seen it. I do not say that there is no mica, I do not think there is any of any account, of no considerable amount

2 If mica had intermixed with sand there, would you have seen it? A I would be likely to have seen it

2 If mica had intermixed with sand there, as it does in Folsom, would you have noticed it?

A I think I would, I know I would, because I have noticed it in the lower part of the country here, a great

many times

Q State whether the Gold Run mines can be worked by any other method than the one in use?. A They can not

Q Why not?. A. It would not be practical to work it any other way. The gold is contained in the entire bank and no other method would extract the gold that I know of, it is so cemented, that it seems to be the only way to work it; is to blast it, with large powder blasts in order to pulverize it, and then wash it off. I do not know of any other method by which it could be worked.

Q Can the Gold Run mines be worked, by any other outlet or dump, than the outlet or dump, now in use?.

A Not without an immense expense which will likely never be incurred. It would be impossible to work them by dumping into Bear River

running a tunnel to Bear River for the reason that Bear River lays so high, that you could not get grade to reach the bottom

2 Q Please what you mean?

A It has to be worked, dumped into the American River or it can not be worked. The grade running through to Bear River comes running you away below the bed of Bear River

2. I understand the distance is so great and the elevation is so different?

A Yes sir

2 That it is not practicable to work it is that question?

A No sir, it cannot be worked

2. Is the present method of outlet and dumping the only proper method?

A It is

2 What is the length of the tunnel outlet?

Mr. Cadwalader I move to strike out, when he said, "it is the only proper method"

The Court. Do you want to strike out the word "proper"
Mr. Dibble We consent the word proper shown stricken out and that leaves it the only method
The Court. It is means the only practicable method.
Mr. Dibble (question repeated in brackets) State what you mean when you say "it is"
Mr. Ladwaladen The word proper is stricken out
Mr Dibble Then I understand it is the only method
A I should say it was the only method.
Q What is the distance between the point on the North bank of the American River and the point on Bear River where you say the difference in Elevation is 1000 feet, what is the distance between the two points
A It is 2½ miles say, about that somewhere from, 2 to 3 miles, not less than

2 or probably more than 3.

2 Then what is the difference of the grade from the point on the Bear River below and from the point on the American River below 2.

A The distance from the point opposite to the mouth of Cain Creek is about 50 miles, it reaches about 50 miles below Wheatland as measured from Doolittles map by myself. That same distance tracing down on Doolittles map to the vicinity of Folsom. I assume that Folsom and Wheatland are nearly the Elevation and of this is a difference Folsom is the highest which would be in favor of the calculation which I make that is in favor of the theory of doing what I was told to do. If Folsom is the highest it would render the grade less and if it

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were the Cowest it would make it higher, but there is no material difference no great difference in the Elevation I assume that they are the same. Wheatland lies up the valley from Folsom to one side of Folsom, lays quite a distance higher up the valley, I suppose 30 or 40 miles, while Folsom lays about 20 miles to the East and right in the foot-hills

Q Do. I understand you that you assume that the grades. Even? A Yes sir.

Q Of the 2 rivers?

A Yes sir it is very nearly

Q. To the points that you refer to? A Yes sir, not Even but very nearly so, it would be even if it was filled up by a uniform flow

Q I wish you would restate that answering and see whether

6773 you are correct in what

You state?
A What answer is that?
Q The question was as to whether there was any difference in the grades of Cain Creek to Folsom, and from Dillar's flat opposite Cain Creek down to Wheatland?
A At the present time
Q Yes sir
A There is a great difference when I say it is the same I mean if the American was filled up - I made the Estimate on its storage capacity, that Estimate was was based on raising the American River to the same grade as Bear River. The present difference is one thousand feet difference
Q 1000 feet difference in grade? A Yes sir. I do not understand your question in relation to that
Q What is the difference in the working the so called hydraulic Mines and dift

Miner? A The principal difference is in getting the material to work. In extracting the gold the process is the same. One takes a portion of the bank the lower portion the process known as drift mining takes the lower portion 6 or 7 feet deep say from 4 to 7 feet deep out by drifting and running the material out in cars and dumping it in what miners term a yard a dump, and when a sufficient amount is collected there to wash properly they apply by drawer process to wash that dirt while the by drawer process takes the entire bank, by blasting and running powder drifts on the bedrock which are run by men working with drills and blasting with giant powder in very small drifts as small as a man can work in, drifting
6775 in under the bottom and

When the get in a sufficient distance they turn and run T's Each way, and run these drifts off side ways about at right angles as a general thing, they run quite a long distance and this is got out by using giant powder, drilling as you would it rock, and blasting it and working it out. It is a very tedious process, this putting the powder in and filling the drift with gravel and tamping it and as shot is put off that blasts the bank and then it is washed. That is the way the material is obtained in the hydraulic process in the blue lead while by drifting process the bottom is all taken out by hand and run out in cars and when collected, washed, the process of washing is the same.

2 By a nozzle.

6776 a Yes sir, by water under

pressure.

Q By water under pressure through a nozzle?

A Some the use the hose with the pipe and other use other appliances - giants, I believe, small giants are put in where the operations are extensive enough to justify it. In the Durbeck mine I understand the power is by a small giant and also at Forrestville

Mr Cadwalader I object to that. You have seen them and I object to his stating merely that he has not seen the Court. Only what you know of your own knowledge

A. All drift miners that I have seen within the last 10 years the water is applied through a hose and pipe or an iron pipe and a pipe attached at the washing process to wash up the dump. I have not been to the Durbeck shaft,

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and the Forest City, that I have learned, that is, I have heard things in relation to that and read it. I presume. I understand that is what they do there & throw it with agiant which is the same process, it is water under pressure

2 What was the proportion of the displacement of Earth sand and gravel in the mining prior to 1861-2 with the amount displaced since that time by mining — take all kinds of mining prior to 1861-2

A The amount of material handled in Early days was very much less to the man than it is now, but as a total I think that more material was handled along from 1851 to 1855 than is handled in Olive lead today by the hydraulic process, more material was worked in cubic yards,

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For instance, 20000 men were working on the American River and all the tributaries would handle in the vicinity of 2 yards a day per man, which would make 40000 cubic yards and about 12.000.000 cubic yards per year; and from the estimate that I made, that I have now, there is no such quantity as that worked today. In the first place the mines on the blue lead only work as a general thing about 5 or 6 months in the year while in Early times, this large amount of men worked the year round; while they would handle more in one particular mine than they would in quite a large section then, yet take the sum total of what was handled then, it was much greater than what was handed today.

2 To what extent was the

displacement up to 1861-2 at the time of the great flood by mining and from natural causes, greater than the displacement since that time by mining and natural causes.

Q The displacement by natural causes -

2 Natural causes and mining?

A It was a great deal more.

2 How much more in your judgment? A When you take 1861 as a basis, it is a question as to what you mean by that.

2 I mean all kinds of mining displacement from the earliest time up to 1861-2 at the time of the flood, displacement from mining and from natural causes, compare it with the displacement from mining and natural causes since that time, since the great flood? A I showed that. It was about the same. I think that more E

780

yards of earth were washed after 1861 say up to 1875 that at any other period, and that since that time the number of yards handled has been very materially diminished

Q The number of yards has been materially diminished?

A Yes sir

Q To what extent do you think the diminishment has been? A Well I should say you take it from 1861 to 1875, I think that 10 times as much material was handled and dumped into the streams as has been since 1875

Q Ten times more?

A Yes sir

Q That has been since 1875?

A Yes sir, I should judge so

Q. Now then take the same proportion as to the character, heft and movability of the material? A I have

6781 reference to the blue lead

Mines

2. Now what has been the character of the material dumped since 1875 into the stream, with reference to what ten times more, prior to that time?

A It has been the bottom material, heavy, very heavy material, prior to that time it was out of the top wash

2 What is the difference of the movability - I will use that word - of that material washed since 1875 and the material prior to that time?

A The floods took the material washed before that time, the floods moved it down stream. The floods scoured it out, cleaned it out in many places, while this other material put in since, remains where it was dumped and remains there now - right in that vicinity

2 What was the effect of the floods of 1861-2 with reference to the commerce

6782

amount of old time washings that had been on the river and in the placers, and hills and banks all over that country?. A It cleaned them out, it swept our what there was as it was collected; the rivers at that time were all choked up with this vast amount of fine material, and that flood came scoured it down and it found lodgment at the foot-hills and in the valleys.

Q Then I understand you that the old floods washed down those old time washings right down here to Sacramento.

Mr Hart I object to what he understands

Mr. Dibble What is the fact then in relation to the flood of 1861-2 washing down into the Sacramento here these old time washings

Mr Hart. I object to that on the ground that it has

6783 just been answered and

there is no use in repeating it.

The Court. He has answered it once and it dont make it any better to put it in again.

Mr Dibble. In what township and in what County is the Gold Run District and the Dutch Flat district?

A They are in Township 14 Placer County.

Q What is the population of Township 14 Placer County?

A It is nearly 3.400

Q How do you know it is about 3.400? A I took the census myself.

Q What is the business of the people of that township?

A Mining as a General thing, not all, but a large proportion of it Mining.

Q. Are there any sheep or cows in that connection, the Attorney General desires to know? A. I do not know of any sheep there.

Q Is there any farming

in their vicinity and if so, state the character of that farming? A There are some few small ranches in that Township

Q. What with reference to the miners farming up there?

A A great many miners have a little ranch of their own, and cultivate a few acres

Q Around their homes?

A. Raising their own vegetables, some of them

Q Around their homes?

A Yes sir, it is not very much of a farming country up there, some few farms a few small ranches, garden spots

Q are you familiar with what has been called in this case the natural wash?

A Not very familiar with it.

Q What towns are embraced in Township #4?

A Colfax, Gold Run, Dutch Flat, Alta, Blue Cañon,

6785 Emigrant Gap. The principal

towns are Colfax, Iowa Hill and Dutch Flat.

2 Do you know the population of Nevada County?

A I do not know exactly what it is, I saw the report, the census report, but I do not remember exactly just what it is.

2 Upon what do the people of Nevada County depend for support? A Principally upon mining.

2 What industry if you know- Mr. Cadwalader I object to that upon the ground that it has not been shown that the witness knows.

Mr Dibble Have you resided in Nevada County?

A I have a great many years.

2 How many years have you resided in Nevada County?

A About 15 years.

2 Do you know the industry by which the people of Nevada County subsist?

A I am pretty well acquainted
Mr Hart. I object to that.
I object to any more testimony as to the industry of the people of Nevada and other Counties upon the ground that it is irrelevant and immaterial. We shall stand on that objection from this time on. We have offered to make an admission
Mr. Dibble They went into the matter themselves and asked about the population of the different Counties
Mr. Hart. We will admit that it is a great industry. But we do object to be kept here for the purpose of proving by a proposition that is entirely immaterial from a legal stand point.
The Court. (After argument) As to this matter, I suppose we all know as a matter of history that a great many people in some Communities are principally Engaged

6787

directly or indirectly in mining operations. There has been testimony going to show that a large portion of the people in Nevada County are dependant on the industry of mining. It seems to me, that so far as it is material, it is already before the Court in the testimony here, besides the presumption that the Court knows about it. I think from the objections made that there is no intention of putting in testimony on that subject on the part of the people when they come to rebut. With that understanding I am inclined to sustain the objection Mr. Dibble We submit to the ruling of the Court and pass the witness to the other side

The Court. I suppose the parties cannot object to the testimony if they had intended to put any witnesses on the stand in regard to that subject.

6788

Cross-Examination
Of
G. H. Colby

Mr. Cadwalader. Where do you reside? A. Inside at Dutch Flat.

Q How long have you resided there? A Since about 1867 that is I have resided there a good share of the time. I have been away a good deal from there but that has been my home for about 10 years. I was there, I resided there a good deal before that but that was not my home

Q What is your business? A For the last ten years since I have made that my home and resided there, my principal business has been Civil Engineer, a Civil and Mining Engineer, principally confined to Surveying, Canals and Tunnels, and connected with mining. For the last 2 years however my business

has been confined to railroad Engineering.

Q Where did you study Engineering?

Mr. Byrne I had you complete to you answer?

A. Pretty nearly so. I states that the last 2 years I have had but little to do with Mining Engineering, my work has been confined to railroad Engineering

Mr Cadwalader. What railroad? A The railroad owned by the Doyle Brothers

Q The Doyle Brothers are the principal owners of the Goose Run mine are they not?

A I believe one of the Doyle Brothers owns an interest in this Company.

Q He and Mr. Jones own the majority of the Stock, do they not? A I dont know about that-

Q Dont you know it?

Mr Belcher Objected to & that as immaterial whether he

does or not, that is not Cross-
Examination
Mr. Cadwalader. Has the Coed
Run mine not been managed
for the last 5 or 6 years by
Jones and Towle Jr.
A It has been managed by
Mr. Jones
2. Well, and by Mr. Towle?
A I do think that Mr Towle
has charged any thing to do with
the management
2 Is not Mr. Towle the Pres-
ident of the Company?
A. I believe Mr. Allen Towle
is President of the Company.
2. You always knew that, didn't
you? A. Always - how
long ago do you mean
2 Well, now, they own a
majority of the stock, don't they.
Mr Belcher Who are they
Mr. Cadwalader. Mr. Towle and
Mr Jones.
Mr Belcher We object to that
If they want to inquire a-
bout Mr. Towle that is one
thing. if they want to inquire

6791

about Mr. Jones, that is another thing

Mr. Cadwalader I want to show that they are partners if I can

The Court. You can show that Mr. Towle has an interest in the mine

Mr. Cadwalader. But not that he is a partner with Jones.

The Court. If you can show that he is a partner

Mr. Belcher. Our objection is that he may not cross-Examine as to Jones- How much stock he owns

Mr. Cadwalader. Well I do not regard it as very material and I will pass on to something Else. Now, where is this Towle railroad?

A It commenced at what is known as the alta, Wood Shed, about half a mile above Alta.

Q And runs where?

A It runs up Cairn Creek about 6 miles and it then

crosses the ridge between them and Bear River, and runs to what is known as Little Bear Valley. There it crosses Bear River and I have made a survey to a point nearly

2. That is a road that you are in charge of for Mr Towle or the Towle Brothers?

A I am not in charge of it. I simply do the Engineering.

2 What was it you said you were in charge of for the Towle Brothers?

A Nothing. I did not say I was in charge of anything for them.

2 Had you been at work for them Surveying?

A I said that I had been practicing Civil Engineering by Surveying railroads for them. That has been my business, in fact principally for the last two years has been that.

2 This railroad you speak of is not in operation is it?

A It is about 40 or 50 miles.

6793

Q What is it, a wood road?
A Nosir
Q What is it used for?
A. They are engaged largely in the lumber business and it is used to transport logs to the mill and the lumber out, and they do a large milling business by means of a rail-road
Q That is what is called the wood business is it not?
A Nosir; it is not called the wood business
Q. Well, when you get east of Alta, the greatest part of the business in Placer County is either wood or lumber?
A I do not know about that
Q Well, that is what I ask you, whether you know. You say that you went to Rice's Bridge or rather Mineral Bar in 1850? A Yes sir
Q How long did you stay there? A Some 2 or 3 months, I do not remember
6794 the exact time.

Q. Well, what part of the year was it? A. I went there the last part of May.
Q. Where were you down on Mineral Bar? A. I went to mining on Mineral Bar, which is right opposite, on the side of the river from Rices bridge.
Q. I know where it is, there you did your mining on the bar?
A. Yes sir.
Q. There were no other mining there except on the bar?
A. Not at that time. There was only two other men working on that bar, at that time.
Q. Three of you?
A. Four of us, two others besides myself and partner.
Q. Well, how long did you work there? A. I was there about 2 or 3 months, I do not remember the exact time.
Q. Then you came down to Sacramento? A. Yes sir.
Q. What time did you leave Sacramento? A. I should think about the 1st of September.

6795

Q Now you say that mining was done on that bar with the rocker? A Yes sir

Q. And you stripped your claim in the first place and piled your rocks up, and then washed the fine stuff through a rocker into the river?

A That is the way they usually did

Q Well, I mean the way you did? A Yes sir

Q. And three of you were on this bar? A Four of us

Q. How long was the bar and how broad was it?

A Oh, it was a small bar, I could not say how long

Q. That is all the mining you did in that year? A Nosir

Q. Well, I mean at that bar? A That is all, I did at that bar

Q Did you have any rules and regulations there?

A Nosir, not there

Q You did not? A Nosir

6796 Q Was there any rule or

regulation requiring you —
A Allow me to make an explanation
Q Answer my question. Was there any rule or regulation there
The Court. If you wish to explain your answer you can do so.
A He asked me if there were any rules and regulations there. I will state this, that the size of mining claims that were adopted there was similar to those in other places. We had certain sized claims, a certain sized amount of ground that constitutes a claim
Mr. Cadwalader What was the size?
A But no rules or regulations adopted
Q What was the size of your mining claim? A. It was then 1500 feet front, running back as far as you mind to go
Q 1500 feet front on the river?
A Yes sir

Q And running back as far as you could go? A Yes sir
Q. You stated the manner in which you worked those claims? A Yes sir
Q You stated that that was the only rule or regulation which concerned exclusively the size of the claim? A. That at that time was the regulation there, and at that time —
Q (Intg) Where did you put your cobbles
Mr Byrne Have you finished your answer? A Nosir
Mr Cadwalader. I do not like to have the witness interfered with quite so much. He has answered my question upon personal observation
Mr Byrne I submit to Your Honor that he was proceeding to answer the question when another question was asked.
A The asked in relation to the size of the claim being 15 feet.
6798 The Court He asked you if

that was all the regulation
in regard to the size of the
claim.

Mr Cadwalader. We claim that
this is a hostile witness, and
we claim the full privilege in
Cross-Examination

The Court. There is no objection
to the Cross-examination only
give him a chance to answer
the question.

Mr Byrne. Answer the question

A Without any formal meeting
to establish customs the few
miners that were on the river
adopted the customs prevail-
ing in other places, and among
them was the 150 foot claim
first established

Mr Cadwalader. Well, what
I wanted to ask you was
whether there was any mining
meeting adopting regulations
for that bar?

A That is what I say there
was no mining meeting to
do this, that by common
consent they adopted the

rules and regulations that were in use in other places on the river

2. That is, they adopted rules and regulations? A As to the size of the mine.

2 As to the size?

A. And how long you owned held a claim without being subject to be jumped and so forth.

2 And that would all, was it?

A I do not know of anything more in relation to it

2. Who were those other 3 persons there with you?

A. One, the man who was with me, his name was Connelly I believe

2 Who was the other one?

A The others I have forgotten their names. I found them there and was not very much acquainted with them, I do not remember the names now

2. There was 4 or 5 of you altogether? A 4 of us

working there while I was there and no more

Q What was the size of the bar? A It was a small bar

Q Well, about how long and how wide? A Oh, perhaps 300 or 400 feet long and 100 feet wide

Q. Was it a rocky bar?

A Yes sir

Q How much material would you take out of that bar and deposit in the sluice box where two of you were working, one dipping and the other washing? A. I estimate about 4 yards a day

Q And how many buckets of dirt, you did not have any yards? A I know. I base my estimate on the quantity ——

Q How many buckets full are there in a yard
A Two men —
Q (Interrupting) Never mind that answer that, how many buckets full did you find in a square yard do you no
A No sir I do not
Q They used in those days wooden buckets?
A I made no estimate of how many buckets Composed a yard. I estimated on the Quantity.
Q Where did you pile the rubbish in your claim?
A The boulders, rock, big rocks were left upon the bed rock where we mined. They were rolled back piled up behind us the fine gravel was taken to the River and washed.
Q That which passed through the end of the Cradle?
A No sir every thing that was taken out to wash went into the River not

only what went through the Cradle but what went over of the hopper on top.
Q Well then you came to Sacramento and remained here how long?
A I remained here some two or three months I do not know the exact time.
Q What months were they
A I came here about the first of September I should think or the latter part of August. I cannot tell and I left here I should think in November I do not remember exactly the time.
Q What business were you engaged in here?
A. I was making Rockers.
Q You came here in September and left in November?
A No sir I came here I think in the latter part of August, I am not certain whether it was the latter part of August or the first of September.

Q You stayed here then during the Cholera season did you not?

A. I was here when the Cholera prevailed,

Q Intended about the first of November did it not?

A I do not remember the time.

Q And it commenced the last of August?

A I know I was here when it prevailed for the reason that a man went up with me in the stage and got off I think at the Mountain House what was known as the Mountain House I am not sure of the name but the house above the Franklin House on the old Auburn road and afterwards I was surprised to learn that he died a few days afterward with the Cholera. I remember the Circumstance of having ridden up with him and then hearing of

his death in a few days from Cholera.
Q You went from here to Rattle Snake bar, that is what you said?
A Yes.
Q That was a River bar like Mineral bar was it not?
A Not exactly like Mineral bar.
Q It was a bar on the River a little higher perhaps?
A Rattle Snake bar — what is known as Rattle Snake bar includes quite a large area of territory.
Q It was worked in the same way was it not?
A The mining was done in the same method at that time.
Q What was the size of the Claims down there?
A The same size 16 feet front and running off Across back into the hill As far as you had a

mind to go.
Q The Rules and Regulations were the same were they as up at mineral bar?
A I do not know that they were the same
Q How did you pile your cobble stones?
A (Interrupting) They were as far as far as the size of the Claims was concerned the same.
Q What quantity of work was necessary to hold them?
A I think there was a difference in that. I think at Rattle Snake you could leave a Claim longer without work than you could at Mineral bar that is then they did at Mineral bar by the rules adopted there.
Q Did you have any regular written Rules and Regulations at Rattle Snake and a Recorder?
A I believe there was

Q The size of the Claims was 15 feet front and running back through the bar
A That was the size of the Claims in 1850 as soon as they came into what they Called Rattle Snake Hill by a miners meeting they made a change in the size of Claims to 100 feet square.
Q They made them 100 feet Square?
A Yes
Q What year was that?
A. I should that was in 1852, in that neighborhood.
Q How much work had to be done to hold a Claim when you went there?
A It was necessary to dig a hole and leave the pick and shovel in the hole.
The Court to the object of this to show that the—

Rules and Customs varied
at different places?
Mr Cadwallader It is to
show this whole method—
how the miners took up
there Claims.
The Court The reason I
asked it was that I
supposed that they would
admit that and save
time.
Mr Cadwallader I should
think not but that is
about all I have to ask
upon that point
Q What was your business
at Rattle Snake?
A It was principally mining
Q Principally mining?
A I engaged in some other
things during that time
Q In the River?
A Not generally in the
River. I was interested in
two flumming Companies there
during the time I lived
there but a large portion
of my mining was in the

bars and hill.
Q That is pluming the River wasn't it?
A I was interested in two Companies during that time.
Q You plumed the River in order to work the bed of it?
A Yes
Q There was no other way
A no other way. I was in two Companies of that kind. I plumed it two years in succession.
Q How long did you remain at Rattle Snake
A I remained there until 1856, I left there in the Summer of 1856.
Q Where did you go to then?
A I went directly- do you mean the first place I went to?
Q Yes?
A I went to Michigan Bluff from there at that time.

Q I mean where did you go to settle after you left Rattle Snake?

A The first place I went to settle was Moors Flat I went to Michigan Bluff And was Engineer for the Eldorado Ditch at first And from there came to Sacramento and then to Moors Flat.

Q Moors Flat is almost on the extreme North Easterly part of Nevada County is it not?

A It is right up from the Middle Yuba River which is the line on the North of the County. It is not in the North easterly part of the County.

Q How far is it from Nevada City?

A It is about 20 miles 18 or 20.

Q What business were you engaged in there?

A Hydraulic Mining

Q Dumping into the Yuba
were you?
A Not into the Yuba direct
but into a canyon between
Moores Flat and Woolseys
which runs into the Yuba
Q What did you say was
the size of the heads of
water used there then?
A Varying from 100 to 300
inches
Q They were measured then
by sluice heads were they
not?
A No sir they were measu-
red by inches.
Q How was the water used
on the bank, with what?
A It was used by a hose
and pipe
Q A hose and pipe made
of what?
A The hose was made of
duck the heaviest duck.
Q Tell us what the pipe
was made of that were used
there then?
A You asked me what the

hose was made of and did
not give me a chance to
answer.
Q Well I will give you
a chance?
A It was made of the heaviest
kind of duck made with
three thicknesses at the lower
end and thick, up about
half way it was changed
to two thicknesses and at
the top one thickness and
at the end of that the
pipe was attached and
that was the way we
used the water
Q What was the diameter
of the pipe?
A At the butt end about
six or seven inches I
should say. At the other
end about three inches
Q Which end was six inches
and which three?
A The end six or seven
inches was the end where
the hose was attached, it
then tapered down to a

8/2

three inch - three inches at at the other end or about that

Q You mean that it was a three inch duck hose at the nozzle? A No sir I did not mean a 3 inch duck hose at the mouth

Q At the nozzle?

A No sir I did not mean any such thing.

Q What did you mean it was then? A You asked me what the hose was made of and I told you it was made of duck

Q I want to know the diameter of the duck pipe at the nozzle A The duck pipe - the duck hose where it connected with the pipe was from 6 to 7 inches

Q That is not what I ask you? A I thought that was what you ask me now

Q I asked you about the other end So on, you can have all the time you

want to answer

A I propose to tell you if the Court will permit me

Do you mean what the diameter is at the nozzle or somewhere else?

Q I want first the size of the hose at the other end, at the nozzle

A The nozzle varied from 1½ inches to 2½ inches. I think there were none used that at that time larger than 2½

Q And this nozzle was applied at the bottom of the bank? A The nozzle applied; I do not assent to that

Q Where did you go from from Moore's Flat?

A I went to Nevada City. That is the next place where I resided

Q How long did you reside there? A About 12 years

Q About how long?

A About 12 years

Q What time did you

leave Mrs Flat?

A 1859

Q 1859? Ayes.

Q And then you staid at Nevada City until 1871?

Ayes that is about the time

Q What business did you engage in there?

A I was engaged in various things - various pursuits — merchandizing was one of them and expressing was another

Q Anything else? A Staging was another

Q That was your occupation for 12 years? A For 12 years principally. I did some engineering but not much

Q Not to amount to much?

Ans Yes

Q Where did you go to in 1871? A To Dutch Flat

Q Have you been there ever since? Ans Yes

Q How long did you stay at Dutch Flat? A That has

been my headquarters ever since that time

O Since 1871? Ayes.

O What do you mean by your headquarters?

A I have been in several Counties of the State since working sometimes at a Season at a time for Companies at my profession

O What is that business?

A Engineering

O Well where were you in 1872, say? A In the Summer of 1872?

O Summer & Winter, say?

A Well I will tell you both if you wish to know. The Summer of 1872 I spent — I was working for the California Water Co. in El Dorado County on the Georgetown divide

O Where were you in 1873?

A In 1873 I was a portion of the year working for this same California Water Co.

O And the next year?

A The next year I was, let me see — that would be 1874 wouldn't it?

Q That would be 1875

Mr Belcher No; it would be 1874

Mr Wadsworth Well, where were you in 1875?

A In 1875 I think I was in Shasta County on a ditch for Alvinza Hayward

Q Doing what? A Engineering

Q What was the ditch doing? what was the ditch for?

A Constructing a ditch

Q What purpose?

A It was a mining canal.

Q Hydraulic mining — for hydraulic mining?

A Yes for that purpose

Q Into the Upper Sacramento?

A It was a canal leading from Cottonwood to a place known as Piety Hill

Q Do work what are called the Hayward mines? A Yes

Q On the Upper Sacramento?

A In Shasta County

Q How long did you remain up there? A I remained there all Summer pretty nearly, and part of the Winter. I left there about Christmas

Q Where were you the next year? A The next year after I left there I went to Arizona and was gone 3 or 4 months and then I went back to Dutch Flat

Q That is 1876? Where were you the balance of the year?

A In that vicinity

Q What were you engaged in? A I was engaged principally in mining & prospecting

Q Well what else?

A I do not remember of anything in particular else.

Q What were you doing in 1877? A I was during these 10 years worked —

Q No, I want to know where you were in 1877; what

were you doing? Where were you first? A In 1877 I think during that year that I worked a portion of the year — lived at Pon Bet — and for the Birds Eye Creek Company a portion of the year

Q At Hydraulic Company?

Ayes.

Q That took you over into Nevada County. Did you stay there the whole of that year? A No sir not the whole year

Q Where did you spend the balance of the time?

A At Dutch Flat and in that vicinity

Q Well East or West of it?

A As to particular portions of the year I do not think I could give an accurate answer to your question, I do not remember every place I was at during those times

Q Where were you in 1878?

A I was in that vicinity

Q What were you doing?
A Working at Civil and Mining Engineering.
Q Where were you in 1875?
A I lived at Dutch Flat
Q Where were you in 1880 and 1881? A I lived at Dutch Flat.
Q In 1880 where did you live? in 1880?
A I worked on the Doyle Bros Railroad
Q Well where have you been this year?
A I have been on their road a portion of the time
Q You were on their road the whole of 1880? A Not the whole of it no sir
Q The greater part of it?
A Most of the time during 1880 I was
Q What part of the road?
Q Up to the Mills in 1880. That was a year ago this last Summer They built a road from Canon Creek to Bear River and

I surveyed it and ~~——~~
had charge of the grading
and so forth. My business
was to do the Engineering
I laid out the road

Q Pushed you where you
were in 1850?

A I was just telling you
where I was. That was my
business that Summer. At
present year my business
has been on Bear River on
a road leading from Settle
Bear Valley to a divide onto
the Smell Hill divide

I have surveyed it as far
as the tunnel of the South
Yuba ditch

Q You said that during
the flood you were here in
1849 and 1850 and that
all was covered but the
Plaza? A Said what?

Q That all the town was
covered except the plaza?

A I said I saw indications
of it

Q That everything was covered

on the Plaza? Yes.

Q How many inches higher was this Plaza than say the main street of the town - J Street from the Plaza to the river? A I do not know the exact difference. It was higher I know.

Q How many inches?

A I could not state.

Q That was before the construction of the new grade wasn't it?

A It was before the construction of the old grade

Q Well that was considered a by flood wasn't it or at least it was considered so in your estimation

A In 1849?

Q Yes.

A It was said to be a pretty heavy flood and

Q And yet it did not cover the Plaza? A not all of it

Q Do you know how much higher the new grade was

as than the Plaza was at that time?

A I do not know. I know it is higher

Q Don't you know it is 9 feet higher? Ans sir I do not.

Q And don't you know that Plaza was not much more than 7 or 8 inches higher than J Street

A I do not know how much higher, I tell you I do not know that. I know that the Eastern portion of the Plaza was higher than any of the country around and a portion of that was not covered from the indications I saw.

Q The town was just as it is now with the exception of the high grade?

A No sir it was not the same as it is now.

<Recess until 2 o'clock>

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In the Superior Court of the State of California in and for the County of Sacramento

The People of the State of California vs. The Gold Run Ditch and Mining Company } Afternoon Session Monday Dec. 19 1/81

Transcript of Testimony Vol.

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G. H. Cobby cross-resumed 6824

Winfield J Davis
Official Reporter

In the Superior Court of the State of California in and for the County of Sacramento

The People of the State of California vs. The Eagle Run Ditch and Mining Company

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Testimony of George H. Colby Cross - resumed

The Witness If The Court please I desire to be permitted at this time to make an explanation just before the adjournment of the Court I was Examined rather critically as to my residence, and desire to make a further explanation about my residence

Mr. Cadwalader Speak a little louder

A. Texas just before the adjournment of Court examined very critically as to where my residence has been during the last ten years. I have been registered in the last ten years at different places owing to my work with different companies, at Nevada, El Dorado and Placer. Texas registered in El Dorado County in my residence at Georgetown, and in Nevada County as at You Bet, that is when Texas at work for the Birds Eye Creek Co. and for the South Yuba Co. For the last 3 years I have been registered in Placer County and my residence is at Dutch Flat. During all this time my occupation has compelled my residence to be somewhat cosmopolitan. I have been registered in different counties. That is what I wish to explain

Mr. Cadwalader Q That is all, is it?

6825 A That is all

Q. You say that when you were in Sacramento you occasionally used to go over to the American River by the bridge?

A No, not at the bridge, it was a ford

Q a ford? A Yes.

Q On the Nevada and Auburn road? A Yes, on the old Auburn road.

Q You said that there was no cultivation in that section of country at that time?

A In 1850, I think not, I did not see any

Q Do you recollect Hubbard's Garden?

A No sir

Q Right at the crossing?

A No sir. At the time I speak of that I went there to bathe, I think there was no cultivation there

Q Do you not know that there was extensive cultivation about Washington?

A I know so that?

Q Do you not know that there were extensive gardens in

Washington in 1850?
A I do not, I was not
asop the Sacramento river.
Q Do you not know that
Smith or Babcock and Hub-
bard and Smith and Stout and
Beardsley all had fine gardens
between here and the ford you
speak of, between here and
the ford in the American River?
A Yes, not in the summer
of 1850.
Q You do not recollect seeing
them? A Yes.
Q How often were you there?
A. I was there frequently, as
often as once a week or
ten days.
Q From there you went to
Moores Flat by the way
of Nevada, did you? How
do the roads run from here
to Moores Flat?
A At what time do you
refer?
Q Well, in 1856?
A. I used to go by stage?
Q And cross Bear River

at Jackson Crossing and went up on the other side of Bear River? A. Let me here say, that I am not sure whether in 1856 there were any railroads on the lower End or not, I think not. I think I went up by stage

Q When you came down from Moores Flat to Nevada, coming down from Moores Flat, you always came through Nevada City, coming from Moores Flat to this place?

A Yes

Q But you took the stage road that carried you from Nevada to Jackson Crossing?

A In 1856, there was a stage line running from Nevada to Orleans Flat, close to Moores Flat.

Q That brought you down to ~~Moores~~ Jackson Crossing or Bear River? A Yes.

Q That was the road you travelled when you went to Moores Flat? A Yes, but

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that is not the road we refer-
red to as the old road leading
to Auburn and Grass Valley.
2 But that was the road
you traveled during these 12
years you lived in Nevada County
until the railroad was com-
pleted? A There were
2 roads from Nevada, one
by the Jackson Crossing at
Bear River, and the other
was through Auburn, sometimes
we would go one way and
sometimes the other.
2 Which road did you gen-
erally travel? A Well, I
should think about an equal
number of times each way.
2 The road from Auburn
came down Auburn ravine
down it to Newcastle.
A It did during the later
years.
2 Well always?
A Yes, not always, no sir.
The old stage road came over
Auburn hill by the old widow
Harmon place

Q That came to Newcastle?
A Yes.
Q To the north or south?
A To the South of Newcastle
Q To the south? A Yes,
Q. You speak of Hoboken having been used as a rendezvous by merchants here in 1852 on account of the flood? A Yes.
Q Would it very largely on account of there being no houses here, all the houses having been burned up on the 2nd day of November 1852?
A That might have had some influence but the floods was the pertenalar reason
Q Were not all the houses in this City burned in 1852, nearly? A Yes, there was a large fire here that burned a large portion of the City
Q Were there any houses left west of 10th St.?
A I cannot say as to that.
Q You need not see any?
A I was not here at that time, I knew of that Extensive

fire, but I was not here to see it

Q Now you were not on the North Fork of the American River after you went into business at Moores Flat, were you? A Not for several years, I was not there every year.

Q When did the 20000 Miners that you speak of that were Engaged in mining on the different branches of the American river, when did they quit the business?

A They Commenced.—

Q I mean when did these men substantially quit the river? A They left in about 1854 or 1855 and went to the high lands from the river.

Q There was very little mining done on the river afterwards that was not done by Chinese?

A There has been considerable done since

Q. But comparatively speaking in that immediate vicinity —
A (Int'g) on the high lands —
Q I mean on the river. How are you prepared to tell us about the river. You would not be apt to know much about it living as you did up to Mooras Flat?
A Not during the time I was at Mooras Flat, I would not know very much about it, perhaps
Q You say you were at Mooras Flat from 1856 to 1862?
A Nosir, I did not state that.
Q No, you are right you went to Mooras Flat in 1856 and you went to Nevada 1862?
A Nosir, I did not state that either
Q What did you state?
A I stated I went from Mooras Flat to Nevada to live in 1859
Q. You were 3 years at Mooras Flat? A Not quite 3 years

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Q Pretty nearly 3 years?
A Yes.
Q What was the character of the American river from 1856 to 1859? When you were living at Mosquito Flat — you would not be apt to know much about it, would you?
A I would have a general knowledge of it. I was on the American River
. Q While you were merchandising and Expressing at Nevada from 1859 to 1871, you would not be able to know what was going on on the American River?
A I think I would.
Q Did you notice of travel going on in view of the American River until you got down here about to what is called Lisle's Bridge?
A Not in travelling from Mosquito Flat down here
Q The stage road did not run any where near the American river did it?

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A. Not until it came pretty near the City

Q Is did not run anywhere near it until you got down here to Lisle's bridge?

A At Auburn it is not very far away

Q It was always off 5 or 6 or 7 or 8 miles and running through a timbered Country?

A There was timber in some places and some places not

Q Then according to your idea there was very little mining done in the river after the time that you mentioned? A From 1855 the great Cult of the mining was up in the vicinity of this blue lead, and they left the river, and went to wash the top strata of this blue lead

Q You have spoken of the dry diggings where were they in Emily Ames in Placer County?

A The dry diggings?

Q Yes sir.

A I did not say any thing about dry diggings

Q Well, when the miners mined in the courts, they were called dry diggings were they not?

A. There was a kind of diggings in the Country known as dry diggings in those days.

Q Didn't they call the diggings round Auburn dry diggings?

A. I think that they owned some under that head in Early times

Q And that the miners threw up their work in piles and waited for the water to come to wash it?

A Not very much about Auburn

Q Well I will ask you whether there was not a great deal of that around Auburn, more than in any other part of the State?

A Now, not more than in any other part of the State

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Q How many were there about Auburn in these dry diggings say from 1849 to the latter part of 1853 — the people that were working in the ravines — dry ravines
A From what time?
Q Say from July 1849 to the biggining of 1854?
A There were quite a number. I could not state how many.
Q Quite a number of thousand?
A No sir
Q Well how many?
A Right in the Vacinity of Auburn but very few.
Q How many?
A Right in the Vacinity of Auburn not a great many.
Q In the Auburn Mining district were there not over 5000?
A No sir I should say not.
Q How many would you

par is or?
A There might have been
a thousand in the vicinity
Q How many were there at
Auburn itself?
A I cannot state I cannot
remember.
Q How many votes did
Auburn poll in 1849 - 50
and 51?
A I do not know.
Q You were not there were
you?
A I was there in 1850.
Q You passed through
there coming down?
A I stopped there and mined
one day. The first days
work I did in the State I
did on Auburn ravine
Q That was all the mining
you ever did there?
A yes.
Q You never transacted
any business there did you?
A Not very much I have
some.
Q How much relatively —

How much earth would
one miner working on one
of those dry ravines disturb
in his Ordinary days
washing. That is after he
had water to wash with.
How much earth would he
wash he and his partner.
How many buckets full?
A I do not know as to
that.
Q Well all the earth he
dug up he dug up with
a pick and shovel didn't
he?
A Yes. the earth itself was
fine gravel. such as they
washed was dug with a
shovel.
Q That was carried with
a bucket to the nearest
water hole?
A It was carried in a
bucket in the earlier days
in 1850 say and after
that it was wheeled.
Q I am speaking about
what are called dry diggings

A As far as dry diggings are Concerned I will state here that I never worked in the dry diggings.

Q There was a good deal of Mining done in these dry diggings without the use of water was there not?

A Without the use of water?

Q Yes?

A. Not that I am aware of.

Q Did you ever see the Chilneans with wooden bowls blowing the earth away from the sand?

A I never did. I have heard of such operations where they could not get water in some parts of the State but I never saw it.

Q Could you tell about what time the bulk of the Miners quit working the dry diggings around Auburn and in that vacinity?

A They have been working

More or less always there up to the present time.
Q When did the bulk of them leave?
A I never knew of any particular bulk leaving there at any time.
Q You do not?
A No Sir
Q Where did the material go to that was washed in those dry diggings around Auburn?
A The material would go into Auburn Ravine there at Auburn.
Q Where does Auburn Ravine empty?
A It runs down into the plains.
Q Where about?
A I never have been to the mouth of it I do not know.
Q It does not run into the American River does it?
A No Sir. I believe I did not testify that it did.

Q Now you say you worked in the hydraulic mines at Moores Flat?
A I worked in the hydraulic mines at Moores Flat from 1856 to 1859.
Q Did you have mining rules and regulations over there?
A Yes.
Q What size were the claims limited to?
A The claims as established by miners at that time were 100 feet front running back to the Centre of the Ridge
Q Running back to the Centre of the ridge?
A Yes.
Q What were the regulations as to the amount of work necessary to hold them?
A I do not recollect the precise regulations in that respect. They held claims whenever they could not get water without working.
Q Without working?
A Yes.

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Q Was that provided for in the rules?
A It was I believe I understood it so.
Q And the Claims were of what size?
A One hundred feet front and running back — according to the regulations there if a man located a mining Claim he had a right to locate it one hundred feet front and running back to the Centre of the Ridge. In those days that was pretty generally the mining Customs not only there but at other places.
Q What was the provision in regard to work necessary to hold them?
A I cannot state the amount of work necessary to hold them.
Q There was a regulation in regard to that the same as there was at Mineral bar that is the work

had to be done by the owner of it to hold the Claim
A A man to locate a mining Claim always has had to do work to hold it.
Q To prevent it from being jumped — that was the term
A Yes to make his location good he would have to do some work — do something have it recorded and do a certain amount of work.
Q Those are the same rules provided for all districts?
A Generally.
Q All over the mining districts? A Yes.
Q as far as you know
A Yes as far as I know until recently — since the act 1872.
Q Those were the objects of the rules — what were the objects?
A So that others might know that a man held his Claim in good faith
Q The size was limited also

And that was the reason the Rules were adopted?
A That was among some of the reasons, to cover those points.
Q Well now have you ever done any mining since?
A Yes, since I worked at Mines? Is that you mean?
Q Yes? A Yes.
Q Where A I worked a part of three seasons for the Birds Eye Creek Company.
Q As Superintendant
A No Sir
Q As What?
A I had a part of charge of the works during the night.
Q You were the night watch man? A Yes.
Q Is that what you were called?
A It was not exactly that. I looked after the water and looked after the mine generally too but was not Superintendent
Q How long in the year did those hydraulic Mines at

Moors flat work when you were there?

A They worked there I think about nine months in the year, there was usually two or three months perhaps three in the winter time, when the snows were deep they did not usually do very much.

Q Did you ever see any following up of ravines to these old placeres while you were on the North Fork of the American River?

A yes I did.

Q Where about?

A I saw it at Rattle Snake bar. I was interested in a claim that was struck that way.

Q How far did you go up?

A We went up on what is known as Rattle Snake flat.

Q That was part of the bar was it not?

A no sir

Q How high was it above the bar?

A One hundred feet.
Q One hundred feet?
A Yes.
Q That was a flat the debouchment of the ravine on to the flat?
A What is that
Q It was where the ravine entered the flat was it not
A No sir the ravine was very rich and they traced it up until they lost pay in the ravine and then followed up on the side hill and went into the flat and we found the lead there.
Q That flat was the part of the bar was it not?
A No sir.
Q How high above the bar was it?
A The bar was right down to the River, what was known as Rattle-Snake bar originally was worked out — the bar
Q I am of the deposit you found One hundred feet above the bar?

A They did not work it over when I left in 1856 although they had worked quite extensively there.

Q They were still working there when you left?

A Yes.

Q How were they working it, with sluices

A Yes. they were working it with ground sluices, the water was run over the bank and caving the bank and running in off.

Q That is the only instance on the American River that ever came under your notice where you followed the lead up from the bar into the hill?

A No sir.

Q What other places

A I think that at Dowd hill the followed up—

Q (Interrupting) I am talking about your own observation

A So you mean of my personal observation.

Q Of your own knowledge?

A I have not been at all
those places where they have
done that mining,
Q I do not want you to talk
about anything you have not
seen yourself, you do not know
of any other except the Rattle
snake of your own knowledge?
A Yes
Q That is all
A I do know of several others
Q Where, of your own knowledge
on the American River?
A I know of Iowa Hill, I
know of Wisconsin Hill, I
know of Yankee Jims?
Q Of your own knowledge
A That is, in my observation
I do not mean that I was
right there present and saw
it done but I know of it,
Q You had heard of it?
A I have seen evidences of
it that is what I mean
Q Explain yourself, that is
that you have seen it done
A Yes I will tell you how
I know, if I saw a side hill

All worked our and traced it right up the side of the Mountain into this blue lead I would say that I had seen evidences of it having been followed up, that is what I mean.

Q I want know whether you are one of those men that did this following up?

A I did not mean to say so.

Q You were not in the country or in that Neighborhood when it was done were you?

A In some instances I have been and some I have not.

Q You were either at Dutch Flat or Merchandizing at Nevada City while it was being done?

A No sir. Those places were found before I went Merchandising long before.

Q You say you were at Pickerings in 1850 was that so?

A I cannot state positively that it was pickerings bar bar

in that vacinity right close.
I am not positive of being
right at pickerings bar at
that time.
Q You rather think you
were not?
A I think I was but I am
sure it was Pickerings bar
Q But you were down at
Mineral bar which is very
close to Rices bridge?
A Yes.
Q And then you went back—
A (Interrupting) I desire to
make an explanation in relation
to that.
Q Certainly?
A When I was at Rices bridge
& Camped on Mineral bar
and I was hunting during
the time I was there, during
a certain portion of the time
trying to find a diggings—
prospecting travelling up the
River up to about Pickerings
bar, I am not sure that I
went to Pickerings bar but
I was right in the vacinity

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& it, I went as high as
that prospecting the River and
the bars and the banks to see
if I could not find better
diggings.
Q If you had been there
you would be apt to
recollect it?
A Pickerings Bar was not
known by that name at that
time.
Q Were you at the mouth
of Canyon Creek?
A No sir I did not go that
high up.
Q You say you went up in
the River bed this year about
seven weeks ago
A Yes.
Q How much of a fall in
the River did you find there
at Rices bridge?
A I estimated it at three
feet.
Q Three feet? A Yes.
Q There had not been much of a
change produced there in
thirty years had there?

A But very little. It had been
filled a little
Q Did you notice any difference
in the change in the grade of
the River between Rices bridge
And the mouth of Canyon Creek?
A I did
Q Or Pickerings bar
A I did. There was a change
in the River right above
Rices bridge at this place
where this large amount of work
had been done — east side —
On the south side — they had
filled in the river more than
at Rices bridge I should judge.
Q you said that the fill there
was six feet?
A I did not say it was six
feet but I should think that
was about the amount perhaps
Q Where this extensive mining
was done above the bridge the
fill was about six feet while
at the bridge itself it was
only three feet.
A Yes that is about it
Q Well now tell me whether

this 72 000 000 of cubic yards which you say had been washed off at Gold Run into the River at the Mouth of Canyon Creek— whether it did not cross this place at Rices bridge where you find now only a fill of three feet?
A I think it had.
Q That whole 70,000,000?
A I think that all of it or nearly all of it.
Q Suppose it had not obeyed the law of gravity and had acted as the stuff which you saw at the mouth of the Polar Star dump tell us in your opinion how deep it would have been— how deep would the fill have been between Rices bridge and Pickerings bar?
A It would have been very deep.
Q It would have been a thousand feet would it not?
A No sir I think not
Q Well how near would it be to a thousand feet?

A I have not estimated it.
Q It would be immense?
A It would be very much more than it is now if it had all remained there?
Q You have no doubt of the degree have you, the fill would be immense. Now take the plane of the River the plane of the bed from Canyon Creek to Pickering bar, what is the grade of it?
A I have not graded it.
Q You have heard it stated have you not?
A Yes I heard it stated.
Q It is about the grade of Bear River is it not?
A I heard it stated.
Q It is about fifty feet to the mile?
A I heard the grade stated by Mr Uren and I believe it to be correct.
Q He said the maximum was 55 and the minimum 35
A Whatever he stated I believe to be correct.
Q Why do you believe what

Mr Wren tells you to be correct?
A Because he is a professional man and I am satisfied he ~~took~~ it accurate — that he took it correctly.
Q Are you not a professional man?
A Yes And I think if I had taken it I would know it, if I had made a survey and taken the grade I think I would know it.
Q You are satisfied the Maximum was 55 and the Minimum 35?
A I will not state that I do not remember his figures but whatever they were I think they are correct.
Q Why did these 72000 000 Cubic yards passover that plane?
A Because it would move so much more easily than the material that is being put in there now
Q It moved over a thirty five foot grade Minimum and

fifty five Maximum}
A I do not state that.
Mr Dibbel He stated that it
moved over because it was
so light.
Mr Cadwallader It did move
those 7200000 Cubic yards
every trace of it}
A That is my observation,
there is not much of it left
None of any account.
Q You Call Pickerings bar
a dump does you, in reply
to Mr Dibbel you spoke of
that as being the dump of
the Gold Run mine}
A No sir I did not say
Pickerings bar was a dump,
Q You do not regard it now
as a dump whatever you did
regard it before Recess}
A I do not Know what you
mean by that.
Q Did you intend to convey
the idea that pickerings
bar was the head of the
dump of Gold Run mine}
A No sir I did not.

Q Now dont you know that you did say it?
A I did not say it.
Q But whatever you said you do not want to be so understood?
A I think I have made a mistake as to that. You say Pickerings bar?
Q Pickerings bar.
A I thought you meant the mouth of Canyon Creek. Pickerings bar, there the dump commences, there is not much of a dump above there, the heavy grade above there has brought everything down to about Pickerings bar. There the filling commences.
Q We are not talking about the filling. Just take a sheet of paper and show how it commences in the bed of the River?
A I do not know that I could show it on a piece of paper.
Q Well for instance you

take the bed rock, you run that bed rock down from the mouth of Canyon Creek until you find the first fill — that you say is very close to Pickerings bar?
A Yes.
Q And Pickerings bar is how far from the mouth of Canyon Creek?
A I do not know the exact distance I think about half a mile.
Q About half a mile?
A Yes.
Q What is the first fill there — it is very slight is it not?
A The depth do you mean?
Q Yes?
A It is slighter there than it is below.
Q It is very slight where it commences?
A It tapers from there to about Fords bar or perhaps a little above Fords bar would be the maximum depth

Q Does it ~~back~~ the River up}
A No sir.
Q It dont } A No sir.
Q It dont set it back at all}
A No sir.
Q Now I think that you said the dump of the Polar Star set the River back for Miles }
A I did – Not for Miles I did Not say but it dams the River and the water extends back perhaps a half a mile
Q You do not pretend to say that what has been thrown in at Pickerings bar dams the water back }
A I did not.
Q Now do you pretend to say that there is anything in the bed from Pickerings bar to Rees bridge that is not a nice easy grade }
A In what respect }
Q A uniform grade. }
A No sir it is not uniform.
Q Substantially so }
A I do not what degree of

Accuracy you call Substantially
O So much so that if you
were Constructing a Rail Road
there in your Specifications
you would say no bar or
no fill,
A If I was Constructing a
Rail Road there I would
go along and make a survey
and indicate the fillings and
the Cuttings.
O I understand that but I
am asking you something
in the line of your profession
as a Rail Road engineer whether
that grade is not so uniform
that if you were making the
Specifications for a Rail Road
up from Rices bridge to
Pickerings bar you would say
no bar or no fill?
A I would not say that?
O you would not?
A No sir,
O Now where would you
have to fill in the River
in order to establish its
uniform grade which you

Say does not exist?
A I would have to fill in wherever the grade was below the grade line, the surface is below the grade line and I would cut it wherever it was above,
Q Would there be any place where it would be under or over the grade line from Pickerings bar to the bridge?
A. Wherever it was above the grade line it would have to be cut and where it is lower it will have to be filled and every high place will be higher than the grade line,
Q Mr Uren said the other day that it would make an admirable Rail Road grade, perfectly uniform?
A It would be a very easy place to grade to make a Rail Road grade but it would have to be cut and filled the same as any other grade,
Q Mr Uren said it was

Almost level?
A Perhaps I can make myself better understood by telling you the places it would have to be cut, wherever there is a dump where the tailings came in there it brings it up higher than in other places and wherever the tailings went away it is lower.
Q But is there any dump of any mine excepting the Iowa Hill mine between Pickerings bar and Rices bridge?
A I think there is.
Q Where?
A At a place called Jamisons ravine I believe that is the name of it.
Q Just point it out on the map there.
A I do not know that it is there.
Q Put your finger on the place where it is?
A It is right down here in front of Iowa Hill (Indicates).

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there are two or three places in four of Iowa hill diggings where tailings came down. I think three places, one is on Jamisons ravine as I understand it and the others I do not know the names of them,

Q So you swear that there is any deposit at the mouth of that Jamison ravine which you saw when you were there this year?

A I do,

Q How large was the deposit?

A I do not remember the depth, a considerable depth though

Q I mean over the general surface of the River bed?

A I cannot say how much

Q an inch?

A I did not grade it therefore I cannot state,

Q You say you do not remember, did you find anything at the Iowa Hill dumps that disturbed the uniformity of this grade?

A I did at each dump

Q Well how much?
A Well that I say I cannot state.
Q You cannot state?
A No sir not having run the grades I cannot state it
Q Is not it a fact that the River is not only graded from Pickerings bar to Rices bridge bar that the stones in the bottoms are graded according there size. the Cobbles?
A I do not know what you mean by that.
Q Is not it true that that River is not only uniformly graded from Pickerings bar to Rices bridge?
A I say it is not uniformly graded.
Q Are not the very Cobbles that form the River bed graded as to size?
A I say they are not
Q You deny that?
A Yes, I say that at each dump the material is very much Coarser than it is

Above and below and below each dump they are of a regular grade until it comes to the next dump and then the material is very much coarser.

Q Does the dump there set the water back?

A No sir.

Q Does they in any way disturb the evenness of the current?

A Yes.

Q How much?

A Well that I cannot state how much.

Q Does any dump extend —

A (Interrupting) I notice below all these dumps the stream was very rapid and the fall apparently more than above them

Q You did not take any levels?

A No sir.

Q You did not even have an Aneroid?

A No sir

Q How long were you there this time?

A How is that?

Q How long were you there

Seven weeks ago?
A I spent one day there.
Q How much of that day?
A Well pretty nearly all day
I went down in the morning
and got through—
Q (Interrupting) Where did
you come from that morning?
A From Dutch Flat.
Q Where did you go to
A I went from there directly
down to the North Fork.
Q Where did you strike the
North Fork?
A I went down to the North
Fork and followed the trail
down that is known as the
Fordsbar trail.
Q Where did you strike the
River?
A I struck it at the crossing
there.
Q How far is that above
Canyon Creek?
A It is below.
Q How far below?
A I should think about
two miles I am not certain

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About the distance.
Q How far is it below
Pickerings bar?
A I should say a mile
and a half I cannot say
as to that.
Q What time did you get
to the River?
A That I do not know. it
was in the forenoon.
Q Who was with you?
A Mr Gould
Q Where did you go then?
A We went first up the River
Q What did you have horses?
A Horses yes.
Q You went up the River?
A Yes.
Q Did you go on horseback?
A Yes
Q Well how far up the River
did you go?
A We went up in the Vacinity
of Pickerings bar.
Q You did not go any higher?
A No sir
Q Well what time was it then?
A I could not state the time

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We started in the morning
And went down as fast as we
Could and we got there in the
forenoon sometime I could not
State the exact time, early
in the forenoon I should say
Q How long did you stop at
Pickerings bar?
A We did not stop there
any longer than to examine
the River, that was all.
Q Did you get off of your
horses?
A No sir
Q You turned right around
And where did you go to?
A We then went down the
River, down as far as Rices
bridge examining the points
as we went along
Q Horseback? A Yes.
Q What time was it when
you got to Rices bridge
A It was nearly night
I cannot state exactly
Q Where did you go the next
morning?
A The next morning?

Q Yes Or did you go back
to Dutch Flat that night?
A We went back that night.
Q You went back that night?
A Yes
Q What time did you get back
A We got probably at eight
o'clock maybe later than that
A great deal of the journey
back was made in the
dark most of it was
Q Did you have any
instruments with you?
A No sir.
Q How did you measure the
width of the River?
A I estimated it.
Q How did you estimate it?
A By examining it by looking
at it.
Q By looking at it?
A Yes.
Q Did you see many changes
in the thirty years that
you had been away from
there?
A Considerable Yes very much
Q Were you able to recognize

it as the same place?
A Yes.
Q You say you saw no high water marks above Rices Bridge they were all obliterated that is the filling was above them?
A I did not state that.
Q What was it you did say?
A I said the high water mark - the original high water mark became visible first in the vicinity of Stevens bridge two or three miles above Rices bridge, that is.
Q They were obliterated there were they?
A From there up to pretty near Pickerings bar they were
Q How high were they above the filling at that point?
A At Stevens bridge?
Q Yes.
A I say there is where they first began to show themselves
Q They were just even?
A I did not say just even I say about; I say there is

About the spot where the
high water line first began
to show itself, not exactly
even I do not claim that.
Q I thought you said it
was visible down to Rices
bridge?
A No sir I did not state that.
Q It must have been visible?
A No sir it is not, necessarily
it is not every place on the
River where you can determine
where the high water mark
was, it is only where there
is a surface of smooth rock
that there is and old water
line marked in the rock,
where it is gravel and
other formations it is difficult
sometimes to determine it.
Q You were not only guessing
that this deposit was so deep
but you got down even to the
fraction of a foot down you?
A Yes in my estimate
Q And yet You were doing
this whole eighteen miles of
the River in the part of a day

On horse back?
A In the first place it is
no eighteen miles.
Q Well sixteen?
A It is about eight miles.
Q You went over the sixteen
miles—
A (Interrupting) Allow me to
make an explination in con-
nection with this.
Q You can make your explination
after a while?
A You have examined me as
to the widths. and I desire
to make an explination & in
regard to it.
Q I will give you all the
time you want and all the
show you want. You not
only guessed how deep this
was but you came down to
the fraction of a foot?
A I do not guess at anything
Q You do not.
A No sir
Q After thirty years you
found the old marks as
you recollect of seeing any

Old marks?
A I found old marks wherever they were visible
Q you found old marks that were there thirty years ago?
A I did not state that.
Q Didnt you see any old marks that had been there thirty years ago?
A I presume I did
Q Dont you know that you did?
A I think I did at that time see high water lines. I would be very likely to see them.
Q You are an engineer and belong to an exact profession You must be able to state whether you did or not?
A Well sir I asked you once to give me a chance to make an explination in relation to it and if you will permit me I will make it now.
Q I will put the question in this form. When you

were there in 1850 and there in 1880 did you recognize any of the high water marks that were there in 1850?
A When you will give me a chance to make this explanation I will answer your question
Q I require the witness to answer the question?
The Witness I have been asked in relation to the measurements of the width of this River, I had been asked to go with Mr Wren to make this Survey and business called me away and I could not go, After the Survey was made I went down and examined the River in relation to the measurements that he had made as to there Correctness, As to the width I found that his measurements Corresponded with my Observations and I used those same measurements because they Corresponded

With my observations and
I accepted them as having
been made by accurate
measurement.
Mr Hart I object to this
explination he was asked
whether he saw any high
water marks, I object to
this explination now,
Mr Cadwallader How do you
know that the measurement
was Correct?
A You want me to state
how I know?
Q Yes.
A I know from Mr Wrens
tabulated report Verified by
his oath here.
Mr Hart I move to strike
that out it is incompetent
Mr Byrne. I object to striking
out anything that is in
direct response to the
question asked by the Counsel
Mr Hart I move to strike
Out his explination and his
Statement upon the ground
that it is based upon

the Judgement of another
person and it is hearsay
and incompetent,=

c "The Court over ruled the
objection and Counsel for the
& plaintiff excepted"
Mr Cadwallader Now you
found the depth to be forty
six feet and two tenths?
A Yes.
Q What was that?
A That was the mean depth
Q What is the difference
between the high and low
water mark in the River?
A That varys in different
places. I cannot state the
exact difference I do not
know what it is,
Q There would be a high
water marke every year
wouldnt there?
A No sir not necessarily
Q Not to some extent?
A No sir I think not it
might be to some extent
perhaps but I do not
think the high water—

the freshets leave—
Q (Interrupting) A witness
here has stated that marks
were made there by the
movement of gravel.
Mr Byrne. Had you finished
your answer?
A No sir.
Q Finish your answer
A In relation to the high
water mark a succession
of floods for many years my
observation is that it makes
a high water mark visible
that is traceable upon the
smooth surface of the rock
but one flood would not be
perceptible I think I do not
think you could determine it
Mr Cadwallader Don't that depend on the
high water— does it not depend on the
bed of the River remaining in its original
condition or not? A No sir
Q The high water mark depends upon whether
the bed of the River is filled or not?
A The high water mark that has been made since
the River has filled there is distinct from the
old original high water mark on the sides
of the rock where there is a smooth surface

Q. Where is the high water mark now at Rices' Bridge?

A I cannot state now where it is there. I do not think it is visible there. There are no rocks by the side by Rices' Bridge that would be stained, that would give any indication where it was

Q. Would not the movement of heavy bodies of débris down the river channel make a mark along the wall?

A No sir, not that kind of a mark

Q Just as plain as if it had been made with a paint brush? A No sir

Q. It was so stated here by Mr Smith, I think

Mr Dibble Only where the rocks existed

Mr Cadwalader There are rocks there on both sides, the whole distance, are there not? A No sir

Q. Nothing but rocks?

A I mean when I speak

of rock, bed rock. I do not mean gravel, I mean bed rock. The smooth surface of the bed rock, that is washed smooth

Q. I mean the smooth surface on the side of the bank?

A Those did not exist all along. We could see them occasionally

Q. But where you did see them, there was a mark made by rough bodies moving against it, or by water - high water? A Which of the questions do you want me to answer?

Q Cannot you always tell when you go into a ravine or a water course, where the high water mark is? A I can, as a general thing

Q That is part of your profession, is it not?

A No, sir, I do not know that it is a part of my

profession

2. It is always noticable isn't it? A As a general thing, I think it is. And that is about the first thing an Engineer would notice, having work to do in a valley where the high water mark was?

A He would be very likely to notice it

2 And yet you saw none, no high water mark, where there was no fill in the river? A I did not state that

2. Did you find any high water mark at Rice's Bridge, or at Rickering's Bar? I wish

2. I wish to explain my position, and give you my reasons for not seeing any

2. I do not care for your reasons for not seeing it. A I would like to know whether I have

permission to explain it or not?

2. My question is, did you see it? That is all I care to know whether you saw it at Rices' Bridge

A I say I did not, and I say there is a reason why I did not see it

2. Did you see any, at Pickerings' Bar, where there was no fill in the river? A I do not think it was right at Pickerings Bar. Did you measure at any place the difference between high and low water mark? A No sir

Q What is the difference between high and low water mark in that canon? A That I do not know

2. It would vary a great deal? A I say it varys somewhat. I do not know how much

2 It would vary a

great deal, would it not?

A In places where the river is narrow, it would be very much higher than it is where it has a chance to spread out, and be wider

Q Now what did you have to get at the depth of the fill in this river?

A My observation and judgment

Q Your observation and judgment? A Yes

Q During this horseback ride up and down the canon? A Yes

Q With Mr Gould?

A Yes

Q You did not make any excavations, did you?

A No sir

Q There were a great many deep holes in the river, were there not?

that A No. ~~sir~~. You mean those that are there now or were there originally?

Q Originally

A There were some places deep originally

Q What was the maximum and what was the minimum filling, according to your estimate, here of 46/10 mein?

A That means the average. I have not the figures of the maximums and minimum

Q I want to know what they were? A The maximum and minimum I haven't got

Q. You had no maximum and minimum?

A I did have them in making the average. But I have not them here

Q You have not them here? A No sir

Q Where are they?

A I cannot tell you that, really

Q What did you take them on? A On a piece of paper

Q. Where is that piece of paper? A I cannot state.

When I determined the mein, I paid no more attention to the matter

2. You do not know what your mein was?

A Yes

2. You do not know what the minimum was?

A It was at a point near Pickering's Bar, and it was about 3 feet at Rices' Bridge on the other end, and in the middle it was between 60 and 70 feet, but the precise amount I do not remember

2. In what distance was it 70 feet? A I cannot state that

2 And at what place?

A I did not state 70 feet. I say between 60 and 70. My estimate of the deepest

2. At what place was it 70 feet? A I did not say that it was 70 feet

2 Between 60 and 70?

A That is in the vicinity

of Ford's Bar

2 How wide is the river there? A Well, varying from 150 to 200 feet, or 250 feet wide. In some places it is 250 feet wide, and in some places 150

2. How did you get at the width of the river?

A I judged it.

A You judged it? A Yes, I compared my judgment with Mr Urens' figures, and that was an actual measurement

2. You did not have Mr Urens' figures at that time

A No, sir, I did not.

2. So you could not have compared it then?

A I did the next day, after I went home. I compared my notes with his, as having been made by accurate measurement, and I adopted them

2. How did you get at the depth? A I estimated it

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Q. How did you estimate it?
A. By making an average of it.

Q. How did you make the averages at that point?

A. Having seen the river in 1850, before the tailings went into it, and going and looking at it, and examining it pretty thoroughly as far as I could, I judged it, and I also took into account the high water line, the original high water line, and I made an estimate of the depth - I averaged it, and the result of my estimate was as I have stated, 4 6/10

Q. Now given this proposition, the bed of the river originally running upon a grade of about 30 feet to the mile, can there be a fill in the river of 70 feet in any place that would not set the water back for several

miles? A You ask me if there could be any such a thing?

Q. Yes A Of course there could

Q. There could? A Yes

Q. Suppose that to be a fact- A (Int'g) I did not state, however, that there was a fill of 70 feet

Q. Between 60 and 70?

A Yes.

Q. How deep was the river where the fill was the greatest, when you saw it in 1850?

A I could not state how deep

Q. How wide was it?

A That I could not state. I did not measure it at that time. I was not looking at it, with a view of determining it

Q. How wide was the bottom?

A I could not state

that-

Q. What was its shape at that point. What was the form of the river bed in 1850?

A It was much narrower than it is now

Q. Do you know that you were there in 1850, so that you are willing to swear to it?

A I am sir

Q. You spoke of hunting. You would not be down there hunting?

A I did not speak of hunting

You said that you had explored the country and the river as a hunter?

A No sir, not as a hunter. I might have used the word "hunt," but I was hunting for gold, for diggings - for pay dirt.

Q.

Q. What time was it you went there, and what time did you leave? A. I went to Mineral Hill, the last days of May sometime, sometime in the very last days, because I landed in San Francisco on the 25th and came to Sacramento on the same night, and left Sacramento the next day, and went to Auburn, and I stopped there one day and then I went from there to the Bar directly, and I think it would be about the last day or two of May, 1850.

Q. You went there the last day of May, when did you leave? A. I did not say the last day of May, but about that time

Q. When did you leave?

A. I left there two or three months afterwards. I could not state the time exactly.

Q. Well day, two or three

months? A Between two and three. I do not know exactly

2. The river was up at that time, was it not?

A It was considerably high; there was considerable water in it

2. There could be no mining done on the river there then? A. Not in the bed of the stream

2. Or on the low bars, before August?

A. It would depend on how low they were

2. I mean on Mineral Bar? A At Mineral Bar we could work when I went there to work

2. They were not worked close to the water? They were working on the top of the bar? A No sir, they worked in the bottom - to the bed rock. I worked during that time

2. Now, you not only

discovered the depth of this fill to be 46.2 feet, but you found where the gravel was impounded. In what sense did you use that word "impounded?" A. Lodged

2. You say you found the material impounded, and the matter impounded consisted of large boulders, cobbles, and what looked like the original gravel. What did you mean by impounded? A. I mean that it lodged there, that it was held there, and for that reason the water did not move it away.

2. It was held on a uniform grade, was it not? The grade was of the same height

A. No sir,

2. Well, if it was not, it made a dam in the river, did it not?

A. No sir, not exactly

2. It did not do that?

A No, sir

Q. That is the way I understood you. You say it was not impounded by means of a dam?

A No, sir, not by a dam

Q. What do you mean, that it was lying upon the river bed? A Yes

Q. In what way were the stones lying there?

A. In what respect?

Q. Well, the heaviest were further up stream?

A. Well, the heaviest were up stream. At the first point, at Pickerings Bar, was the heaviest material, and it grew finer from that down, as you went down the river, it was apparently pretty well graded, and it became finer of course, as you went down, until you came to the first dump, and then the character changed, and it became much more

course

2. What was the height at the first dump. What is the Iowa Still dump?

A I could not state that

2. You stated before that it was three feet?

A I did not

2. That is the way I have it here? A I did not state any such a thing

2. Is there any more than that fill at Iowa Still of three feet? A. As far as the height of the dump is concerned, I don't know

2. Didn't you say it was 3 feet, on your direct examination?

A No sir

2 How much is it?

A. I do not know how much it is

2. Is that embraced in your estimate of these 46.2 feet average fill for the 8 miles?

A. The extra height of the dump?

2. Yes A. Yes

2. Is the fill there embraced in your observation made on this particular day, 30 of this year at that place?

A Is what?

2. Is the particular fill at this Iowa Hill dump embraced in your observations, when you were there 7 weeks ago, or thereabouts? A Yes

2 You have not been there since?

A I made the estimate the next day, after going over the ground

2. You have not been there since? A No sir,

2. Did you cross the river? A Yes, several times

2. You were always on horseback? A Yes

2. You rode up and

rode down? A We got off when we ate dinner. We got off and sat down, and ate dinner

Q. You got off when you got hungry? A. We carried some provisions along, and that is the only time we got off, when we ate our lunch

Q. If you do not know the depth, the width or the shape of the river at Fords' Bar, how could you determine the filling? except by a conjecture?

A. Do you assume that I do not know either of those things?

Q. You stated a short time ago that you did not recollect - I asked you whether you recollected - whether you were there or not in 1850? And you said you did not recollect. ~~That is the way~~ I recollect your testimony. I do not

want to do you an in-
justice. Was that so?

A I do not understand
you

Q. You recollect observ-
ing the river in 1850, which
you found filled this year
to the extent of 70 feet? Yes
or no. You recollect ob-
serving that particular
part of the river in the
year 1850; that you now
say is filled between 60
and 70 feet?

A You mean that par-
ticular spot?

Q. Yes, that particular
spot? A I saw that particu-
lar spot, but I did not ob-
serve it as to its depth or
width at that time

Q. Nor as to its form?

A Not for the purpose
of determining the fall,
I did not

Q. Form? A. I have a
general recollection of
that

Q. That is the only time you ever saw it?

A. How is that?

Q. That is the only time you ever saw it before it was filled?

A. I did not state that- I think

Q. I ask you that now? A. I saw it several times

Q. When? A. That same season

Q. In 1850? A. In 1850. I say I was familiar with the river up to about Pickerings' Bar

Q. During the 2 months you were there?

A. Yes. I made several trips up the river prospecting, and I was pretty familiar with the river

Q. Now this material which you say was impounded, you say consisted of large boulders and cobbles. That is so, is it

not. That is the stuff that you say is impounded? Boulders and cobbles?

A If I used the word "impounded," perhaps that would not be a proper expression. But if I used it, it is all right.

Q. You used that word or Mr Dibble got you to use it, but that does not make any difference whether you did or not. What I want to get at is: Whether the impounded matter is correctly described as consisting of boulders and cobbles? A They were not all large boulders or cobbles.

Q What else? A They constituted a portion of it.

Q. You said the great bulk? A The great bulk, the majority - the large majority has large boulders, cobbles, and gravel.

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and finer debris, and from that down to sand. That was the character of the deposit

2. What kind of sand?

A Ordinary sand, what sand I saw

2. Coarse or fine?

A I could not state as to the coarseness, or fineness. It was ordinary sand

2. What was the current of the river when you were there? A You mean how many miles per hour?

2. Yes, when you were there two weeks ago?

A I could not state, but it varied considerably in different places

2. The river was clear was it not? A Yes, comparatively clear

2. It is what you call clear water? A. Yes, it was what I would call a clear stream

2. Was the river running fast enough to move to

move the sand. You could see the bottom? A Yes.

Q. Did you see any conglomerates in that section of the river? A What do you mean by conglomerates?

A. Well, masses of cement.

A Like this? (Pointing)

Q. Yes. A. No sir, I did not.

Q. If there had been any there you would have seen them? A. I might, and might not

Q. You were there for the purpose of observation?

A Of course if there had been any large mass of it, I would be very likely to see it. But there might be a good many bunches of it, and I not noticed it

Q. If there had been any large masses of that material put in at the mouth of Cañon Creek, it would have gone further down than Rices' Bridge?

A No sir, I do not think

it would

2. Why cannot you see it then? A If they are in there, they are probably covered up, and maybe mixed with other material, and are not noticeable

2. You put a piece of material like that, in the river there, and a man might pass it a dozen times and not notice it

2. Not if he was there for the purpose of observation alone? Now, would a mass of conglomerate alone, naturally displace a mass of cobbles, would not it have less gravity and move over the cobbles instead of displacing them?

A You mean, I suppose, that conglomerate I suppose you mean this cemented gravel?

2. Like this (Pointing)

A You mean this, for instance

Q. Yes that hard lump before you? A This material I have seen deposited a great many times in many places

Q. I ask you whether or not that conglomerate having less specific gravity than cobbles, would not move over the cobbles instead of displacing them? A In the first place I do not think it has less specific gravity, and in the next place I think it would not

Q. You think it would not what? A Move over the other cobbles

Q. Did you dig down to see? A It would go with it

Q Go with what?

A Go with the cobbles

Q. It would go with the cobbles? A Yes

Q. Then, if you saw the cobbles, would you not see

the conglomerate, if there was any to be seen, would you? A Not necessarily

Q. Why? Now, it is in testimony here—

Mr Byrne I ask that the witness be allowed to answer the question. He was asked "why?"

The Witness. Mr Cadwalader, if you would like me to express an opinion, and answer from the best information I have, I think I can at time

Mr Hart We will withdraw that question, and put it in another form

Mr Cadwalader Have you ever made any test of the specific gravity of this cemented mass which I call conglomerate, to see whether it is more or less than stone. You know what the specific gravity of that stuff is?

A I do not

Q. How do you know

that it is more than stone?

A I did not say it was more than stone

Q. You guessed-

A [illegible] I did not say or guess that it was more than stone

Q. You said it was more than stone? A No sir

Q. What do you say now. Is it more or less?

A From my observation I should judge it to be about the same

Q. There would be no reason why it should displace the stone, and take the place of the stone without it had more specific gravity, would it? A No sir. It would be very likely to go into the river as it was. It would ~~not likely~~ to be mixed with the rocks

Q. If it is a fact that there had been 5,000,000 yards of that heavy

material put into Canon Creek - the heavy cemented mass that you describe as constituting the bank of the present Gold Run Pit, since the completion of the tunnel in 1876, you ought to have found some of it between there from Pickering's Bar to Rices Bridge?

A I think I could, if I had looked for it

2. You did not look for it? A. No sir

2. You did not see any of it below Rices' Bridge, did you - immediately below? A Your question is unfair. You assume that so much has been put in there, and such is not the case. I do not see how we can decide exactly the amount that goes down which is pulverized. The amount that goes in pulverized is

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small in comparison with the balance

Q. It is all pulverized then, isn't it? A Not all

Q. How much of it?

A It depends how successful a blast you make. How much is pulverized

Q Do not these men understand their business? A They understand it tolerably well. A man may pulverize a bank with one shot, perhaps, and the next shot will be almost a failure, and it will break up in large chunks

Q. Did not you tell Mr Dibble, that they stood with hammer in hand to do what the powder and the water did not do? Answer the question. Didn't you say that there was a complete pulverization of this material?

A I did not

Q. Either by the powder or by the water? A No sir I did not

Q. Or by the hammer or all combined?

A No sir, I did not state that

Q. There was no sledge hammer business done there? A. I did state that there was sledge hammer business done

Q. Didn't you say the powder was used, in order to pulverize the material? A. I did

Q. Now is not water used for the same purpose? A No sir

Q. It is not? A No sir

Q. Does it not accomplish it in any degree?

A No sir, the water is used to wash it away

Q. And to disintegrate it? A No sir, that is not the purpose. You would not ask that question if you

were acquainted with hydraulic mining.

2. Where does it occur. Where does the disintegrating occur, What are the causes that produce it?

A I have told you that it was blasted in the first place, and that pulverizes the majority of it. The large pieces that are too large to wash through, are broken up with sledges as a general thing, so that they will go through. Still it goes through without being pulverized, or without pulverizing it as much as possible

2. What does the drop have to do with it: Does not that help?

A What drop do you refer to?

2. The drop at the end of the tunnel, the 70-foot drop?

A No sir.

2. There is a drop then

of 70 feet? A I do not know the distance. There is quite a fall

2. There is a flume with railroad iron in the bottom? A I have been told so

Q Then there is a fall of 150 feet in Cannon Creek?

A 150 feet?

Q Yes sir. Do not there in one place? A I do not know as to that

Q Then the Kinder under current is on a low grade of the creek? Now don't all those cause a perfect disintegration of that cement?

A It would be likely in going down to become pulverized, that is the rock separated from the cement to a certain extent, I do not think it would all be pulverized

Q So that there is nothing at the mouth of Cannon Creek in the shape of hard material going in except the rock? Are you ask me to testify in regard to that?

Q Yes sir A well I penned decline to testify to that?

Q If the cement is all disintegrated there is nothing coming in except rocks, cobbles and stones?

A If it is all disintegrated Q You state substantially it was don't you? A I did not state so

Q You said you found none of it down at Rice's bridge? A Of course I stated that I did

Q Did you find any immediately below Rice's bridge?

Ans sir

Q If there had been any there you would have seen it would you not?

Ans sir not necessarily; I do not believe there is any though, on Rice's bridge

Q Is there any Cañon below Rice's bridge where the bed rock of? Ans sir I think there is somethere

Q What would be the effect of it where your piers bed is set with

cobbles on a grade of 20 feet, of projecting upon it masses of material of less specific gravity than the cobbles themselves?

Q What would be the effect did you ask?

A Yes would ~~not~~ this light matter move on the grade or would it bury itself on the cobbles?

A That of course would depend somewhat upon the grade and the volume of water.

Q Well take the volume of water in that ruin and the grade? A These dumps that have been dumping in here evidently been smoothed by the heavy currents of freshets going over them have to a certain extent been moved, no doubt about that.

Q You stated that this matter is that cemented matter in that Gold Run pit was 80 per cent rock

and 20 per cent sand?
A I did not state that
Q Or sand and gravel?
A I stated that was
my estimate on it
Q Did you ever make
that estimate? A I did
Q When? A About 7
weeks ago - about 6 or 7 weeks
ago
Q Well what mine did
you try? A Do you mean
by actual test? Q Yes sir?
A To pulverize it?
Q Yes sir A No sir
I did not; that was a
matter of judgment
Q Suppose you took rocks
that are egg shaped and
put them together and filled
their interstices with fine
material, gravel and clay
what will be the respective
amounts; what will be the
amount of rock in that
composition? A Well in
the first place that would
not be a fair test.

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Q You would not know would you? Did you ever make a test like that?

A No sir, I never did. I know enough about it to know that that would not be a fair test

Q Of the amount of rock?

A Yes sir, the amount of fine material, not of rock.

Q Now you said, I do not know whether you intended it or not, there was nothing there but rock and sand?

A No sir I did not say that

Q If you did you do not intend to; there is clay there isn't there? A I never saw any

Q Never have seen any clay? A No sir

Q You say there is no clay? A No sir I do not say there is not any but I have never seen any

Q Have you ever looked for

any? Anor in particular to look into the question. I have been three times into the mine to make examination as to the material there

Q Well what is slate made of? A Slate, I believe from the best knowledge I have, is a sedimentary formation

Q Well it is clay is it not? A Well, I would not swear to that. I am not geologist enough to be an expert on that

Q It might be? How would admit that it might be?

Mr Belcher There is no "might" about it. It is either sand or is not and he or he don't know

Mr Ludwalader If slate was clay you would be very much mistaken?

A I would not call slate clay by any means; slate such I would not call clay

although it has this formation I believe, it is said to be a sedimentary formation

Q You said that pipe clay was made of sand didn't you? A I say that the ingredients that compose what is generally termed pipe clay is simply sand cemented

Q Cemented with what?

A Well I do not know the materials that enter into the Composition

Q Haven't you gotten it exactly wrong isn't it clay with a small amount of sand in it?

A No sir

Q It is not? A No sir

Q But it is the other way?

A There are two kinds of pipe clay that are recognized by miners. There is one kind that is found in small quantities that is probably clay, soft, adherent. It is sticky, it is something like the plasticene you see

here but the great mass of pipe clay as known by hydraulic miners is simply when it is dissolved it becomes sand

Q Well will it dissolve?

A often

Q Is not that the trouble, that it will not dissolve?

A yes the weather does it

Q Do not that the trouble; that it is almost indissoluble, that hydraulicking has less effect upon it than any other material found in the bank?

A That kind of material dissolves by exposure

Q And is not a hydraulic mine considered of no account where there is much pipe clay in it? A It is a very serious objection to a hydraulic mine to have a large body of pipe clay, such pipe clay as you cannot wash.

Q Anything that is composed of sand is easily washed is it not? A It is when

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it is disintegrated

Q Well it is easily washed?

A It is very easily washed when it is pulverized

Q Therefore if pipe clay was composed of sand, as you say, almost exclusively it would be easily washed?

A I do not state that pipe clay is almost exclusively composed of sand, I say the material that by drafts miners usually call pipe clay is composed principally of sand

Q If it was it would be very easily washed would it?

A Very easily washed sir, wherever the water will dissolve it

Q Now do you want us to understand that that bank that the Gold Run Company had been washing was all alike, all cement, there was no matter in it that would not yield very readily to water?

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A I did not state any such thing

Q You did not? And sir

Q How do you divide that bank?

A How is that?

Q You say you did not; I understand you now to say that there is a large part of that bank of the Gold Run mine that is easily washed?

A I did not state that ever. I will say that however there is quite a portion of the top that can be piped

Q Well how deep down?

A Well that varies

Q Well how deep?

A Well I should say that about two feet of the bottom it is necessary to blast the balance of it could be piped I think without blasting

Q Well how much would that balance be? A Well I do not know exactly it might be 40 or 50 feet

Q 40 or 50 feet You stated

that 20 times as much of the top could be washed than the bottom. Allow me to state that the depth of the gravel right in the Gold Run mine is much deeper than it is North of there, that in fact is the deepest place in the district that I have seen anywhere the total depth there was much greater than anywhere else that I have seen

Q Well? A For instance the average as I have estimated the average of the balance that is left there is 120 feet while in the Gold Run mine it is deeper than that, I should say 140 feet

Q Do I understand you to still say that the bottom stuff is 20 times as hard to wash as that top?

A I did not say any such thing

Q How much of that top will water wash? Of

this top gravel in the present pit of the Gold Run, how much will an inch of water ~~run~~ wash in 24 hours?

A Oh that would be an estimate. I can approximate perhaps

Q Well about how much?

A I should say from 3 to 4 yards

Q Don't you know that all the other witnesses fix it at 7? A Well I am satisfied that is not correct

Q Well how much would an inch of water wash of the lower, the hardest portion in 24 hours?

A Well I think that an average of that would be about 2 yards, I would not place it higher than that

Q You make the top how much? A From 3 to 4 perhaps

Q And what would you make the average? A I

should say about 2 1/2

Q 2 1/2? A Or 3 yards

Q You never have washed any of that have you?

A No not in the Gold Run mine. I have washed similar gravel, in the blue lead too

Q How much of that upper material would an inch of water wash in 24 hours?

A In mean the top of the Gold Run mine?

Q Yes sir

A The extreme top, that that was washed off first?

Q Yes; the 72 000 000

A Well of that I should think 8 or 10 yards to the inch

Q What proportion of the bank of the Gold Run mine will an inch of water only remove 2 cubic yards? A I should think it would average the lower 80 feet of it. I should think about that

Q And how deep do you make it, the average?

A I say 80 feet of it. I think that about 2 cubic yards to the inch would be about a fair calculation.

Q But I want you to fix it. You said 80 feet but the remainder 80 and 60, that is the way you divide it? And sir that is not the way I divide it. The way I did divide it was, you are asking me now in relation to what can be moved per inch. I did divide it at 100 feet deep necessary to blast and the balance could be worked without.

Q Well how much do you make that? A But I think when you make an average of 2 yards to the inch in a day, I think it would take about 80 feet deep, would enter into that calculation.

Q How much would be left to be washed out at the rate of 3 or 4 cubic yards per miner's inch?

A The balance of it

Q How many feet?

A. I have never measured it, I think though about 60.

Q Well what is the reason you did not measure it if you have been in it?

A I did not go there to make a survey of it. That is the reason I did not

Q When did you go there?

A I have been there to help to make that cross section that Milburn had here, that I helped to do

Q How long were you in the pit? A I judged some of the heights also

Q How long were you in the pit? A Pretty nearly all day. I have been there 3 times

Q That is the only time

you have been there in this individual pit? A No sir. I have been there 2 other times.

Q What other times?

A I was there three times about 6 or 7 weeks ago in the pit

Q Then in the previous five years you have not been there at all? A Yes

Q Well how often?

A Well, I cannot tell how often, I have been there frequently

Q Give us some idea?

A I was there a year ago and I have been there several times, but I cannot say how long

Q And your idea is that only one per cent of the matter that comes out of that pit will go below Rice's bridge? A I say from 1 to 2 per cent was my judgment

Q That is your opinion?

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A That is my opinion Sir.

Q Do you know how much matter is carried in suspension by the Gold Run flume into Canon Creek?

A No sir I do not

Q You do not know? By what formula do you determine that, of the matter washed out of the Gold Run pit, and to be washed out of the Gold Run pit? A I do not determine it by formula

Q Excluding the top washings, you said just now that only 1 or 2 per cent of the total wash will go below Rice's bridge? A I did not show it by any formula

Q What is the velocity of the water in the flume?

A That I do not know

Q What is the velocity in the river? A I do not know that

Q What is the quantity of water in the river?

A That I do not know

Mr Dibble I object to that on the ground that I have not asked the Witness a single question about that, as to the velocity of the water in flume or in the tunnel or in the river I have not asked a single question about it

Mr Cadwalader Does your professional learning extend as far as measuring?

Mr Dibble I object to the question on the ground that I have asked no such question and it is only trifling with the Court

The Court It don't seem to be insisted upon.

Mr Hart It is insisted upon if your Honor please This Witness is introduced to determine as an expert and engineer as to how much matter is carried in suspension below Rice's bridge. That is determined

as is shown by a number of Witnesses here, among others Wm Hamilton Smith as to the velocity of the water and now he testifies that he is an engineer. We want to know how he determines the velocity of water and and by that means determines its capacity to carry matter in suspension. It is a matter of scientific knowledge and his opinion is not worth any thing unless his competency is shown. Wm Dibble I asked him nothing about it; the carrying of matter in suspension depends as much upon the heft of the material as it does upon the velocity of the water. I asked no questions upon that subject and a stream that has very little velocity of water and holds matter in suspension will hold it until the stream gets

lazy and drops it to the bottom. I state that to Counsel as a practical miner

Mr Cadwalader Q How do you determine the velocity of water in a river: A I don't determine it

Q Your education as an engineer never extended that far did it?

Any practical pro does I have done such thing sometimes but I have not in this case

Q Where were you educated as an engineer? A Educated partially myself and partially in the State of Vermont

Q What school, what technical school did you ever attend? A I was not educated at a school that was specially founded for that purpose: of making engineers

Q You are a surveyor

are you not, rather than an
Engineer? Ayes sir I have
done a good deal of work—
do you ask me on what I
base my knowledge of the
business? Do you desire
to know that?

Q What is that?

A I wish to know if you
desire to know on what
basis—

Q Certainly I will ask you
whether you are an Engineer
or a surveyor by profession?

A That is my business

Q Which? A Both

Q How do you determine
the velocity of running water?

A I should determine the
velocity of water by actual
experiment

Q Well how in what manner?

A I should take the
current and measure across
section of it

Q Well just state your
formula? A I have no
formula for it

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Q You have no formula?
A None; and I think an engineer who puts his reputation upon formulas is in a very bad fix
Q Suppose the width and depth of water and its velocity were given how would you arrive at the amount of the discharge?
A I say by timing the current and measuring the cross section
Q Well how would you arrive at it? Well it is easy to compute it
Q Well do you pretend to understand the measurement of running water?
A I am not expert perhaps in hydraulics
Q Well do you know how to ascertain the velocity of a current? A I have always been able to determine everything of that kind that I have had occasion to do

Q Well how do you know it? A By measuring the cross section and determining the current

Q How do you get at the velocity of it? A By timing it

Q Timing it where? A At any given point

Q Well are you an engineer, do you pretend to be a hydraulic engineer?

A I have not made any pretensions at all here to day that I know of

Q Do you offer yourself in that capacity before this Court? A I have not offered myself

Mr Belcher. He has not stated himself that he has

Mr Deadwalader. Q Do you know the depth of velocity of the American river from the Gold Run ridge to Folsom?

A I do not

Q During the time of

high water. A Does not

Q Do you mean that when the river is up that sand will not tunnel into the water. A I did not state that

Q Do you mean to say that water don't go through that tunnel carry 14 to 15 percent of the carry sand in suspension with it.

A It may at times and may not

Q But at all times.

A I know that it don't at all times, I know that no hydraulic claim runs with a uniform amount in suspension

Q But, where the amount of water is the same and they are doing the same kind of mining won't that sand flume carry 14 or 15 per cent of earthy matter in suspension

A I would say not

Q Well how much will it

carry? A I don't know

Q Will it carry the sand?

A To a certain extent it would

Q Will a current running at the rate of 6 or 8 miles an hour carry, or drop sand? A That I do not know as to just what kind of current would drop the sand

Q Will not a current running at 2 miles an hour cut away a sand bar and start it down the river?

A It might do so — I do not think 2 miles an hour will move much sand — I do not think on a cobble bottom a current of 2 miles an hour would

Q Would a current running at the rate of 2 miles an hour pick up sand that had been dropped in the bed of the stream? A I should say not to any great extent

Q Do you pretend to say that at least 15 per cent of the material in the fold Run bank did not move down in suspension that is of the water from Cañon Creek to the Sacramento River?

A I do. I say it does not

Q How do you determine the amount or weight of solid material that running water of a given velocity will carry?

A I have not determined it.

Q Well have you got any formula? A I do not make my calculations on that kind of a formula. I will state if you desire to know, how I made my calculations on that

Q What was it moved this 72,000,000 cubic yards that you have spoken of from Cañon Creek to Pescadero Run? A What did it?

Q Yes sir; what moved it?

A I say principally this

two more flood of 1861 and 1862

Q But was not the greater part of it deposited after the flood of 1861 and 1862?

Yes sir Certainly, but there have been other high floods that have kept it out since

Mr Stibbs I do not understand you to say that your calculations have been made by observation without formula?

Mr Hunt I object to Counsel examining the Witness now

Mr Stibbs I want to ask the Witness if that is his statement, that he made his calculations upon personal observation and not upon formula

Mr Hunt I object to that The object of this examination is to test the question whether or not the opinion of this Witness is worth anything.

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The Court go on

Mr Cadwalades How would you determine the amount or ~~size~~ weight of solid material that running water at a given velocity will carry or would carry?

A I have not determined that

Q Well does your learning extend that far as an engineer? A I never have had occasion to do that I think I could do it if I was required

Q What works on hydraulic engineering have you read, or in engineering? or Civil Engineering?

A I got my knowledge of Civil Engineering by first reading Professor Davies' Course of Mathematics and applying them in this Country myself and have principally relied upon my own experiments whenever I have had occasion

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to make any

Q Well that takes in arithmetic algebra geometry and plane surveying don't it

A Yes sir Engineering.

Q Well does it take in hydraulic Engineering?

A It takes in algebra geometry surveying and Engineering

Q Well plane surveying, or does it take in hydraulic Engineering? Ans sir I think Davies does not treat of hydraulic Engineering

Q That you studied when you were at school? A Yes

Q But not since?

A Yes, considerably since

Q And that is the only work is it? A My mathematical knowledge is based on that work

Q How long is it since you have looked into them?

A Oh perhaps it has been 2 or 3 months, I have read pretty much all of Davies

Course of mathematics

Q Do you pretend to say that there is anything you saw in the North fork of the American river between Pickerings Bar and Rice's bridge that prevented the downward movement of any of this material from the Red Ravine mine? A How was that?

Q Do you pretend to say there was any dam or obstruction? Answer I do not, no dams. There was some obstruction

Q Is there anything to impound the debris between Pickerings Bar and Rice's bridge to use your own terms that may be put into the North fork at Canon Creek by this mine?

A Anything to impound it

Yes, to keep it from going down. Anything except granulation

Q Well granulation

would help it wouldn't it
Ans Sir
Q It would not move
down by virtue of the law
of gravity but would stay
up? A It would not
move from Rue's bridge to
Pubenings Bar by the law
of gravity, it would not
be likely to, that is the
grade is not heavy enough
to affect it that way
Q Its gravity would not
help it? A From what
came down to Pubenings
Bar gravitation would
assist it materially
Q All this material is
rounded at the corners
down to grains of sand is
it not? Ans Sir it
is not
Q well the cobbles are
all washed are they not?
A they are washed but
not round
Q But rounded at the corners?
Ayes Sir the corners are

smoothed off. The cobbles as a general thing rounded off and smoothed on the outside

Q You say this top washing ended in 1860? Were you not mistaken - did not that top wash continue down to 1875? A I did not say it ended in 1860

Q That is the way I have it in my memorandum

A Well it is a mistake

Q What is what you said in direct, that it ended in 1860? A I did not state any such thing

Q How did you know that they kept on washing that until 1875?

A In that neighborhood I do; up to about that time

Q Very large masses of it were sent down between 1865 and 1875?

A Yes sir I think a majority of it was between

those years

Q Between 1865 & 1875 well now the flood of 1862 could not have brought that down could it?

A How is that?

Q The flood of 1862 could not have brought down what was put in after 1865 could it?

Answer

Q Well a great deal of it was brought down by the subsequent flood was it not?

A Yes sir while they were working in the top we had several floods from 1861 and 1875 and those floods kept the pure pretty well cleaned out

Q Do you want to be understood there is 900 feet fill in Bens Run do you mean to be understood as saying there is 900 feet fill in Bens

River? A No sir and I did not state so either.
Q You mean that the grade of Bear River between Dutch Flat and Wheatland was greater than it was between Camon Creek and Folsom? A I did that is my impression
Q That is all you mean was it not or was a grade of 50 feet per mile and the other a grade of 30 feet? A As to what the grade was I did not state I state this: that Bear River is at the present time about 1000 feet higher than the mouth fork at Camon Creek
Q That is the natural bed is it not — you mean the natural bed
A No sir that is not the natural bed. That is Bear River as it is today and the North fork as it is to day

Q I mean the natural bed of Bear River?

Ans Sir that is not the natural bed, that is not the difference between the natural bed of Bear River and the North fork, that would be 110 or 120 feet less. I am talking about the present bed

Q The difference is owing I suppose to Bear River not heading as much in the mountains as the North fork? A I do not know that that is the cause of it, but what the cause is I do not know

Q There is a great deal more water in the American than in the little Bear River, or in the whole of Bear River? Ans Sir

Q How much water does the American river carry?

A The North fork of the American river is the size of Bear River not

very much difference
Q Whereabouts
A The main Bear River
Q How does it compare with little Bear River?
A Little Bear River is a gulch that don't carry much water. It is a very small portion of Bear River
Q Into what stream does the Polar Star tail?
A Into the Bear River
Q Little Bear River?
A No sir, not little Bear River
Q Are you sure of that?
A Yes sir
Q How many mines are above the Polar Star?
A The Little Bear River comes in about a quarter of a mile above the Polar Star dump
Q How many mines are there above the Polar Star dump? A I do not know how many. There are

6995

Pine

Q Well you know of one?

A Yes sir

Q Well what one?

A There right in the hill North East from there known as the Mary Red Hill

Q That is what one?

A It is a mine owned by Staggin and Davis of similar deposit to the Polar Star

Q That is the only one is it? A Elmore Hill is the name of the hill, it is in the Mary Red District

Q That is the only name known of? A No sir that is not the only one

Q Name another one?

A Upon the opposite side is Liberty Hill an extensive mine there.

Q Where is Liberty Hill?

A I think there were two or three mines there. I know of one in particular is pretty extensive known as

the Dittle Work Company

Q You have got two now in here? A I think there is more than one at Liberty Hill. I do not know how many but more than one

Q How does the water in Bear River in quantity compare with the American at the mouth of Cañon Creek?

A At what point in Bear River? At the Polar Star?

Q Yes sir. A It is less at the Polar Star than it would be at Cañon Creek

Q In what proportion?

A I cannot say. In high water there is not so much difference as there is in low.

Q Well how much in low water? A In low water there is considerable difference

Q 5 to 1? A No not so much as that.

Q How much? A I should say about 3 times the water

Q Three times as much

as the American?

A In low water.

Q Down pretend to say speaking of this Polus Star dump — do you pretend to say that crosses the river?

Mr Byrne I object to this going into examination. The witness has not pretended to say anything. It is constantly thrown at him that he has pretended to say this and that he has not pretended to say this. I submit that this style of question does injustice to Counsel and to the Court and to the witness

Mr Leadwalader I will be as polite as you require me to. I will say "Down under me to understand that the Polus Star dump extends across the river"?

A It does clear across

It has dammed the river up 100 feet. The pond above it

is about 100 feet deep.
that it makes
Q Has it not left a waters
way on the North side?
A There is a waters way.
There is bound to be that
over every dam
Q This is not a regularly
constructed dam is it?
A No sir It is a dump
of the course material
into the river and it takes
all kinds of shapes and
it does extend clean across
the stream
Q It is where the stone and
cobbles come off of the Polar
Star mine and drop into
the bed of Bear River?
A Yes Sir higher on one
side than on the other but
high enough on all sides
to raise the river in my
judgment
Q The river runs on the
north side of it? A Yes
Q Even in low water?
A At low water and high

water both, because the dump is higher on the South side than on the North

Q Don't you know that all the material goes over dams? A How is that?

Q Do you pretend to say that dam in that river makes an obstruction and prevents the passage of gay sand down the stream?

A It does. That obstruction does prevent the flow of sand

Q Don't you know that over the Bear River dam 30 000 yards of sand is always passed in suspension? A No sir I do not know that

Q All the water goes down stream does it not?

A Usually

A Well I mean the water of Bear River. It goes down stream don't it — it goes down stream; it don't stop

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A This dam dams it up and makes a large pond above

Q You mean the water goes down stream? A The water is very still in that pond Down and the sand would settle in that way

Q Well put it in this way: is there any water below that dam in Bear River?

A Below it?

Q Yes sir A Certainly always

Q Well now what is the character of that water, is it clear water?

A Right at the dam if they are working, it is not clear. It would get clear in going further Bear 4 miles comparatively clear

Q Now the water in the Polar Star mine runs in this dump don't it?

A Yes sir

Q And the water below is just as muddy as it is

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above? A Stow is that?
Q The waters below the dam is just as muddy as it is above? Q That would be where it flows over you mean? Q Yes sir.
Q About the same I judge
Q The water flows over the crest of the dam?
A It runs over that immense amount of cobbles and boulders dumped into Bear River and runs in an irregular manner over it
Q How long is this dam up and down the river?
A I should think that perhaps it was half a mile
Q How high is it in the centre in the highest place?
A I should judge 2 or 3 hundred feet
Q How high is it close to the North Star Shore?
A From 100 to 150 feet high. That would be my judgment

Q When did you last see it last? A I do not know exactly. I do not pretend to be exact about it

Q When did you see it last? A I have seen it dozens of times every year lately

Q When did you see it last? A I cannot state exactly. It might have been 2 or 3 months ago

Q Is the dam filled up above with tailings? Ans. No.

Q It is not? Ans. Is there is a large body of water there and at the upper end of that water it is filled with tailings considerably

Q You say the water below it is bad?

A It is what?

Q The waters below it is bad? A I did not say so

Q Well I ask you?

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A In what respect is it bad?

Q Well does it carry a great deal of sand, a great deal of clay?

A Immediately below it, I should say when the Polar Star is running it may carry some sand but I think no clay

Q What makes this dam at Bear River, what is it made of? A Made of cobbles

Q Nothing else? A Boulders

Q Nothing else? A Cobbles and boulders and gravel dump, the interstices are all filled of course with finer gravel

Q When were you at that dam last? A Have not been at the dam for perhaps 6 months, I do not remember the last time I was at it

Q When were you there?

A I cannot state that

Q Did you ever measure it

69 v 74

Ans sir I did not state that I had measured it. I only intended to approximate

Q In all your acquaintance with the American rivers do you know of any dam that has ever obstructed the down flow of mining debris in that river?

A I do

Q Where? A The North fork dam

Q Where about?

A At Tanavoo Bar

Q Who built it?

A It is built by the North fork Company

Q When was it built?

A It was called at that time the American Water Company, it has generally been known as the North fork Company

Q When was it built?

A It is built in 1854 first. It has been built two or three times

Q What effect would the

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water pay of 1868, the flood of 1868 have upon the debris above that dam? A What effect would water have upon it?

Q Would it fill it up — would that dam fill up?

A It would be very likely to

Q Wouldn't it have an arresting capacity that can easily readily estimate

A Of course

Q Can say the dam is 20 feet high? A Of course a man could measure it and could approximate the number of yards it would hold

Q How high was that dam? A I do not exactly recollect the precise height I did know at the time

Q It was not over 20 feet was it? A It was, I should judge about 20 feet.

Q How wide was it?

A I should say about 200—

I did know the height and the width when it was built but I do not now

Q What would be the crushing capacity of solid material?

A I am unable to state

Q Can't you estimate it? It would be a few thousand yards wouldn't it?

A I should say so. I do not know how much

Q If the American river rose at that place 60 feet it would carry everything over that dam wouldn't it? A I do not think it would

Q Well would not it clean the channel out completely? A If it cleaned the dam out it would be very likely to clean the channel out too

Q Well has it not cleaned it out several times?

A I believe it has several times

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Q Now are there any dams formed by the operation of water upon tailings in any place in the State of California except at the Pedar Star Mine? A Any dams made in a similar manner is that the question?

Q Yes sir?

A Yes sir, a great many of them

Q Where? A In California? The Cedar Creek, The Baker claim at the lower end of Dutch Flat, does nearly the same thing only there is not a pond above it

Q It has no pond above it

A No sir, the Little York Company upon one side and the Birds Eye Creek, and the Hazward claim on the other side of Slick Hollow do that same thing and a very extensive pond of water is held back in the stream above

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2 When were yu there?
A I think about a year ago was the last time I was there

2. What time of the year?
A I do not remember what time exactly

2 Do yu know the arrest. ing capacity of those dams?
A I know that they have sufficient capacity to hold back every thing above them and that they cannot stay there year in and year out and dont so out if that is what yu mean

2. Why does any material thing go down Bear River — Why does the bed of Bear River raise below there?
A It seemed flow over

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Q. It flows over the dam just as if it was not there
A When they filled that with water it comed flow over of course They keep filled up all the time as the dam rises the water rises

Q The sand goes with the water does it not?
A. I should think not I do not think any sand goes over

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Q. Well, is it not sand that
Owner down here principally?
A It is not sand that
make these rivers roily.
Q What is slickens made out
of? A That is the kind
of material that you term
slickens
Q What is the slickens made
out of? A Well, I do
not know that I am expert
enough to determine that fact
Q You are not enough of a
hydraulic miner to state.
Don't you know that it is com-
posed of sand and clay?
A I know it is not com-
posed of sand.
Q You know that there is no
sand in the slickens?
A What you term slickens
here, I presume there is, but
not in a proper sense.
Q What do you call slickens?
A I call that that is held
in suspension and that roils
the river what is held in
suspension in the American

6961

river

Q Do yu know what that is made of? A I do not know the component parts of it, I know there is a material difference between that and sand that is held in suspension

Q Do yu know how often the Bear River ditch, coming out of Bear River has to be cleaned fm the first 1200 feet? A I do not know how often

Q Do yu know the amount of solid material that passes through the Bear River dam in suspension? A I do not know.

Q Do yu pretend to say that a size in the neighborhood of 20 or 30 feet would not sweep out everything that is above the dam? A I did not say so the dam went.

Q You do not believe that sand above the dam would be carried away? A Not that that is below the crest

0962

of the dam owned not, to any great Extent

Q In not there in the neighborhood of the crest of a dam always a great current

A More than anywhere Else

Q Well, dont water passing over a dam produce a very great current.

A Right at that place it does

Q. There in the place you owned down for a current in it not, on the crest of a dam where the water was pouring over.

A I do not know that I owned always. I owned Expect to find a strong current there.

Q How do you pretend to say there in no granite above Folsom — or all granite above Cann Creek.

A I do not. I do not state so

Q. Well, there in no vast amount of it in there.

Mr Belcher. Has she said any thing about the County above Cann Creek

6963

Mr. Dobble. I never asked him a single question in reference to that

Mr. Cadwalader. He stated that that the formation above Folsom was slate?

A I did not. Allow me to correct you.

Q. What did you say?

A. I said that the granite belt ceased between Rattlesnake and Oregon Bar and from there to Cairn Creek was principally slate and no granite, I never saw any at least

Q. When you got above Cairn Creek? A I did not state anything about above Cairn Creek

Mr Belcher That is something upon which we have made no enquiry

Mr. Cadwalader This relates to the subject they went into, they have got him to state that the formation above Folsom was slate

6964

We want to show that it changes and turns into granite
Mr. Belcher We say that it is not the proper time or place for them to go into that-
The Court. I do not remember their asking the witness about it
Mr Cadwalader He said that the formation above Folsom was slate. I want to get all the knowledge of the witness on that subject on record and that is the way that it appears that the formation above Folsom is slate
Mr Belcher We say that it does not so appear in the record
Mr Cadwalader Well, I do not want to take up the time of the Court and the time of the witness. Now you say that mica comes exclusively from granite, do you?

A I did not say so.

Q Well, what do you say on that subject where mica comes from?

A My observation is that it abounds in the region of the Country where the red rock is. & that is my observation. I do not pretend to state any thing about it I do not claim to be an Expert, I say I do not state any thing about it but that is the result of my observation. But so far as Geology is concerned I do not profess to be an Expert in that particular branch.

Q Well now, Mr Dibble got you to say, that by the Early mining there was a displacement of 12.000.000 cubic yards per month on the American River

Mr Belcher I desire to make an objection to the form of the question. It does not seem to be respectful to the witness nor to the

961

Cont — that Mr Dibble got him to say

Mr Cadwalader. Well, I did not mean that. I will change that.

A I should deny that Mr. Cadwalader

Q I did not mean it in that sense. Well, Mr witness, you did state that the displacement prior to 1862 on the American River from the 20000 miners was 12.000.000 cubic yard per month?

A I did not

Q What did you say upon that subject?

A I said that from my observation the great flood of 1861-2 swept out most of the fine material that was then in the streams.

Q Well, you are answering some other question now

A Perhaps I do not understand you

Q How do you know that

A I state from observation

6967

2 Well, where were you, you were not in the neighborhood to observe, you state that you were not in the neighborhood to observe what occurred on the American River after you went to Mosses Flat

A Well, I was well acquainted with the American River and most of its branches before that time and have been upon the American River since and know of the river pretty well

2 Well, when did you go there after 1862?

A I do not remember the first time it was soon after that though.

2 You state a short time ago that you were in Nevada City from 1859 to 1871 as a Merchant and Expressman

A Not all of the time

2 Were you on the American river at any time between 1858 that you went to Mosses Flat and 1862-3

6968

A Yes sir
Q Well where?
A. I was on the American River at the time I lived at Moores Flat opposite the town of Auburn
Q Whereabouts
A Opposite the town of Auburn
Q Well, whereabout, down on the river
A Down on the river
Q How long were you there?
A. Well, I can not state the exact time I was there
Q How long were you there?
A That I could not state
Q Did you examine it up and down the river
A No sir, I was not there for the purpose of examining the river particularly
Q What year was that?
A I do not know the year
Q Now did you or did you not? A I think it

6969

was in 1858 I should judge it might have been in 1857

Q You were there a part of day you say, about 1862?

A I went down or to the river and spent about a day on the American river at that time

Q What year was that?

A It was either in 1857 or 1858, I can not state which

Q But were you there after 1862 at all? A I have been there a great many times, since 1862.

Q Well what time after 1862? A I have made several surveys

Q. Well, when for the first time after 1862?

A I do not remember the first time. I can not state. I have been there so many times that I do not remember any particular time

Q Did you examine the river with a 5 years after

6970

1862 so as to post yourself on this particular subject

A. I did not make an Examination for that Express purpose

Q Did you examine it at all within 5 years after 1862? A What do you mean by Examining it

Q Well, going down the river and following it up and looking at it and observing it? A No or what purpose

Q Well for the purpose of seeing what changes have occurred? A I never went for that purpose, I speak from a general knowledge of the American River and I am perfectly familiar with all its branches. I have a general idea

Q How much debris was there, when you were there the first time after 1862? — how much debris was there after 1862, say the first

6971

Mile below the North Fork?
A I could not state that
Q Was there any?
A I should think there was some.
Q Well, when was it and how much was there of it.
A I can not tell that
Q Can you tell anything about it? A Yes sir I do
Q You are not guessing at it
A No.
Q. Well, state what you know about it, When you went there and who was with you and what you did and what you saw — State the particular sections of the river?
A Well sir, I can not state as to any particular section of the river
Q. And yet you are a Civil Engineer. Now what did you mean by saying that prior to 1862, 20000 person has worked upon that river, and were de-

6972

pointing debris there at the rate of 12.000.000 cubic yards per month.

Mr Belcher He did not say per month

Mr Cadwalader Well, what did he say

A. My estimate was, 2 yards to the man which would be 12.000.000 cubic yards pr year, counting 300 days every year

Q Well, you stated those 20000 men quit on that river substantially by 1856?

A I did not state so

Q Well, didn't you say that the great bulk of the miners had left the river by 1856

Mr Belcher. The bed of the river he said

Mr. Cadwalader. No sir, he said the river

A I did not say that

Q Well, I will ask you whether you did state it?

A I did not. The great

6973

built of this fine material that is what I stated

Q Well I am asking you you whether you did not say that the great bulk of the miners had left the river by 1856? A. I might have said by 1856 — I might have said that the large proportion of them did, I think I did

Q. Don't you know that you said the great bulk — was not that the language that you used? A. I might have used that language I do not remember that.

Q Now do you know whether they did or not?

A. I do.

Mr Belcher. I make the objection that he has been over that matter in detail and asked all the questions that he cared then think of, and I do not think it is useful that he should resurrect the same

6974

Subject and propose the same question over again Mr Cadwalader. Now do you know whether the Creek of there miners had left before 1856 or not?

A I know from my general confirmation of the river I will now even you not in the North east corner of Nevada County at that time?

A 1856, No sir

Q From 1856 & 1859 you say you went to Moores Flat in the fall of 1856 and stayed there until 1859?

A I think I did not see the American River during that time but once, I mean high up in the mountains I stopped at down here several times

2. Yet your travel from Moores Flat did not embrace the line of the American River because you came down to Jacksons Crossing when you crossed Bear River? A I do not say that and that is not the fact

6995

Q. Do you know how many miners were at work in the American River from 1856 to 1862?

A I do not know how many

Q. Do you know the amount of material that they displaced between 1856 and 1862?

A I do not know how much. I know considerable was

Q. You know that they displaced anything of your own knowledge?

A I know that a good many miners have lived there all the time, and some are still living there

Q. Don't you know that during a great part of the time there was no mining done there except such as was done by Chinamen, which was called "skinning" the bars?

A I do not know that,

and do not believe it either

2. Do you pretend to say that working in the bed of the river is like taking matter from the hill tops, and depositing it in the bed of the river, so far as the displacement of material is concerned?

A It is different

2. One adds to the material in the river and the other does not. That is the difference, is it not?

A That is principally the difference

2. You never would fill up a river, by disturbing the original drift, would you? A No.

2 Or by washing the bars? A I mean the original bed. That is, that that is below the water line

2. You would never fill up a river by washing the bars down stream,

would you. You would not add anything to the quantity in the bed of the river, by washing the bars down stream? A. I do not understand what you mean

2. Would you add anything to the deposit in the American River, by washing a bar down stream

A I should say you would

2. In the same sense that you would make a deposit of a similar quantity in the bed of a river from a hydraulic mine? A They are not in the same sense, allow me to explain

2. Now just explain?

A In working a bar alongside of the river, and piling your heavy material behind you, and dumping the fine gravel and sand into the river, it would fill up the bed

of the river, while you would leave the cobbles and heavy material lying on the bars. They would simply be smoothed down, and would stay there, The fine material would be likely to be moved off- carried down

2 You have heard people say that there has been but a comparatively small amount of deposit by hydraulic mining in the American River, since 1875. Do you know the extent of that deposit?

A Nothing but a general idea

2 How much is it? How much material has been deposited by hydraulic mining? A I have made no estimate on that-

2. How do you know that there was 10 times as much deposited before 1875, as since?

A I know it by general observation, and by having a general knowledge of that mining region

Q. So that, without knowing how much has been deposited since 1875, you are willing to swear that 10 times as much were deposited as since?

A I do not swear to that. That was my estimate. That was my judgment by being acquainted with the mines, and the surroundings

Q. You say you do not know how much has been deposited since 1875?

A Only comparatively. I know the amount deposited since 1875 is very much less than it was before

Q. It has still been a large amount, hasn't it?

A Not a very large amount as compared with what was deposited before

Q. There has been a good

deal sent in from the Iowa Hill Mines, has there not? A. Considerable

Q. A good deal from Gold Run, and a good deal from Georgetown. Is that so, or do you know?

A I do not know how much from Georgetown. I know something about it, though

Q It is a large amount?

A I do not know. I confine my statements to the blue lead. I did not go up to El Dorado County. It was the washings of the blue lead that I spoke of

Q. Do you say there is no blue lead in El Dorado County? A I did not say any such a thing

Q What did you mean by your last remark?

A I said that what I said in relation to that applied to the hydraulic

mines that were working on what is known as the blue lead. It was upon that, that I was basing my calculations, and not upon the surface washings in El Dorado County or in any other county.

Q. Are there no blue lead mines in El Dorado County?

A. Do you want me to give an opinion about it?

Q. Yes. A. My opinion is that there are.

Q. Where? A. At Placerville, but none at Georgetown.

Q. Do you mean Placerville or Georgetown?

A. I say I believe there is a blue lead at Placerville, but none at Georgetown.

Q. What one do you refer to at Placerville?

A. I do not remember the name of the company. It is known as the Deep Blue Gravel Company, I think, and there is some

other name attached to it

Q. What I want to get at is this: You do not know what has been deposited in this American fork river since 1875?

A I have a pretty good idea what is in that region of country

Q. Well, what is it?

A I have made no estimate of the amount that has been deposited, but from the testimony here it appears to be about 4,000,000 from the Gold Run Mine that has been deposited since 1875

Q. That is, from one?

A Yes. There has been some testimony as to two or three millions from Iowa Hill

Q You did not know that until you heard that testimony? A Yes. I knew there was about that amount, but I did not know the

exact figures

2. What amount was deposited between 1862 and 1875 — you were where you could have observed on that subject?

A From 1862 to 1875?

Q Yes sir from 1862 to 1875?

A Could not state, I have made no estimate in gold. I know that it was a very large amount

Q Well in 1862 you went to Nevada and after you got there you went to Shasta?

A How is that?

Q You went to Shasta?

A No sir, I went from Dutch Flat to Shasta

Q You went from Last Chance to Shasta, do not you?

A No sir.

Q What part of the time between 1862 and 1875 were you at Dutch Flat?

A From 1862 to 1875 I was at Dutch Flat having charge of I did not live there all the time but about in 1867

6984

until 1875 I was in Dutch Flat often and a good share of the time I stand there over night

Q - A good share of the time you stand there over night?

A Yes sir

Q But where were you in business from 1862 to 1875

A Well a portion of the time I was in business in Nevada City and a portion of the time I was in a business that required me to be in Dutch Flat daily.

Q You were in Shasta too, since that time - I want to know if you know how much was put into the American River between 1862 and 1875?

A I do not pretend to know the exact amount.

Q Do you know to any extent? A I do

Q How much was it?

A I know it was a very large amount.

6985 Q Well how much?

A I have made no estimate as to the amount.

Q. You have no figures at all? A No sir, not on that

Q. You are not where you could get figures?

A. I could —

Q. (Int'g) When did you leave Nevada City, in 1871? — You lived in Nevada City from 1859 to 1871, did you?

A. I stated it, but I would like to make an explanation in relation to it, there was a portion of the time, the last 3 or 4 years before that, that I was in Nevada City almost daily, I was there most of the time but my real residence, I was registered as a voter in the town of Yon Bet and perhaps that was the place of my residence. Perhaps my residence during that time should be fixed at Yon Bet instead of Nevada City, I was half of the time

6986

at Each place.

Q When you say that none of the material now deposited, goes down stream — comes down from above?

A Very little of it

Q You fix it at 1 or 2 percent?

A I should judge not more than 2 per cent passed Rices Bridge. I will give you my reasons for it if you desire to know them.

Q You state that there could be deposited of the 900 feet, that there might be a deposit 900 feet high made at Canon Creek, without a foot of the deposit extending beyond Folsom, is that what you have already stated?

A Provided that material was of this blue lead, this bottom stratum of this blue lead without taking the top of it

Q You mean the lead of the Gold Run mine, or the bottom part of the lead?

6987

A. I mean such material as remains in the channel at Folsom Rock

Q The 120 or 150 feet, or as you figure it, the 18,772,333 yards that is the amount you have estimated as remaining to be washed?

A Yes sir, whatever that estimate was. It is that kind of material. I say it is likely to lay in the American river if it was raised 900 feet

Q Just turn to your work and see if that is not the figure? A. 18,773,333 yards

Q That is the material that would be deposited in the American River 900 feet high, and the foot of it would only reach Folsom?

A I do not think it would reach Folsom if it was raised 100 feet high but I have made my estimate on the basis that it would

Q It would not reach

6988

Folsom yet, this material
would not flow down?
A How is that?
Q There would be a point the
other side of Folsom yet—
this material would not travel?
A I do not think it would
travel if put in the Stream
and raised that high. I do
not think it would run to
near Folsom. I say I have
based my measurements in
determining the cubic yards
on the supposition that it
would. I do not believe it
would flow that far.
Q Now your idea of the
storage capacity of this Stream
is based, all this stuff coming
out and arranging itself so in the bed of the
river that no part of it will
get below Folsom?
A That is my theory.
Q You think it would be
carried?
A <Entity> I do not wish
to go on record that no

part of it comes down, there might be one or two per cent, I do not claim that nothing comes down.

2 Possibly 1 or 2 per cent

A. Yes.

2 And that comes be all A That I claim comes be the sand if it comes escape

2. It comes be sand alone?

A Yes sir

2. There comes be nothing else?

A I think so

2 You divide that material into stone and sand do you not?

A Well, that material as a general thing is boulders, stone, cobble, finer gravel which is stone really and sand that is the bulk of the material

2 Now you state further that the strength capacity of that section of the river between Folsom and Goose Run comes be reached to such an extent that the depth might be 900 feet high

6990

at Gold Run and yet no Matter would pass down the American River beyond Folsom save this one or two per cent?

A That was the way I made it, 900 feet high

Q At Cairn Creek, running down to nothing in the neighborhood of Folsom, that is what you call the storage capacity of the river?

A These were the dimension on which I made the Estimate — from which I made the Estimate?

Q This is what you call the storage capacity of the river? A That is approximately what the river would hold if filled up to that Extent.

Q You thought that quantity was billions — your idea is that whatever that figure is — that number of yards to the Extent of the figure you mentioned could be put in there at Cairn Creek

6991

without any danger of any of it getting below Folsom Except the 1 or 2 per cent you mentioned?

A I do not think it is possible to put that in there for it is not there to put in, but I think if it were deposited it would stay in the river and fill it to that extent before it would flow by Folsom

2 400 feet at the mouth of Cain Creek? A Yes sir

2. Just give us the data from which calculation will you, the length and breadth of the river?

A The estimated length of the river from Cain Creek to Folsom - 50 miles or 88.000 yards, average surface width at present 62 yards, depth to be filled 300 yards those are the figures and it is calculated on them. I take into the calculation that the hills slope at an

angle of about 40°

2 And you figure owned be a right angle triangle in which the square of the hypothenuse owned be equal to the length of the other two sides?

A It owned not be a right angle triangle

2 That is not true?

A That is not true, sir

2 Mathematically the Square of the hypothenuse is equal to the length of the other two sides? A. That is not true but the Square of the hypothenuse is equal to the sum of the squares of the other two sides. that is true. I had occasion to demonstrate that once in geometry.

2. How wide did you make that figure 62 feet

A Those 62 yards is the principal surface of the river. 62 yards was the principal surface from which I based my calculations

2. What effect owned the operation of the water coming down the main American river have upon this figure as it was in the course of construction? A. It owned raise as the gravel raised in the stream

Q That is not what I asked you — what effect would the water above Cañon Creek in the American river have on it? A It would make a small sized lake up there, it would raise as the filling raised

Q would not it run over it occasionally and wash it down? A It would run over it I think constantly

Q As you raised the grade of the river would you not increase the velocity of the matter coming from Cañon Creek, would not you give it a higher grade to move? A So raise it 900 feet would not give it as much of a grade as is required to move this material in my judgment

Q You mean that there would be no erosion at all of the surface of the figure upon the water that came out of Cañon Creek

6994

A From the water that came from Canon Creek

Q In your view there would be no erosion of the surface of that figure?. A I do not know any such a thing and I have not studied any such a thing

Q Do you know that the water of the North fork from above Canon Creek would not wash that matter down

A To a certain extent, it would wash it down to a certain extent

Q Where would it send it to? A It would wash it down till it got the point at which it did not pass any further

Q It would destroy the form of that figure wouldn't it? A It would not be a right angled triangle, I did not say it was a right angled triangle

Q It would very nearly send it below Folsom wouldn't it?

6995

A I think not sir, as far as my observation would go it would not

Q Suppose the force of a freshet at a particular point would be 2500 tons what would there be in your formation to resist it, the higher this gravel bed was raised the wider it would get and the water would be very shallow and when it got up 400 feet I think it would scarcely move sand.

Q But I was asking you this: Suppose at a given portion of your plane, of your surface was exposed to a water surface amounting to 2500 tons would it give way? A I do not think there would be any particular swing away about it

Q Well put it in this way: suppose when you get your first 100 or 200 yards of sand in the bed of the river

it would be subjected to a pressure of water equal to 2500 tons what would become of the sand? A I do not know that I understand your question

Q Suppose you would take the Lime Canon right below Rices Bridge and fill it up with sand to the depth of 20 feet and then a freshet comes say like that of 1862 or 1867—8 or 1881 what would become of your sand in that given section of the Canon? A I will tell you: in the first place your supposition is ridiculous. But if it was the sand would naturally go down stream with the large volume of water running over it

Q Do I understand you to say that this volume of water would not clean the Canon out? A If it was pure sand I think it would. The large volume would be

very likely to do it

Q Would not it clean every thing out? Ans Yes I think not

Q Is there any thing there now is there any thing in that Iron Canon below Rice's bridge? A I estimate to be about 3 feet. ~~I mean~~

Q I mean in the Canon below the bridge?

A It has been a year or two since I have been in the Canon. I am unable to say just what is there now

Q When you were there was there any filling? A Some little I should judge

Q How much?

A Perhaps a foot or two perhaps 3 feet. I do not remember exactly. There was not much filling below Rices bridge

Q How much solid matter is moved from that flume?

A A very large amount is.

Q Consisting of cobble stones,

6998

gravel sand and clay?

A Not very much in that shape. The cobble stones are not and not very much clay for it is not run into the rivers except this deep stratum of what the miners call pipe clay

Q Is there any difference in the grade of the Cañon and the grade of the rivers between Cañon Creek and Pickerings Bar. A Very much difference I do not know the amount

Q Do you know that there is any? A I know that there is a very much rise in from Cañon Creek to Pickerings Bar. I estimate that grade to be about 6 miles although I have not made a survey. Six miles to a rod

Q Have not cobble stones passed over both plains by the operation of water?

A Solid stone

Q Over the two plains that first from Cañon Creek to

Pickenings Bar and secondly over that Canon in the river immediately below Rice's bridge? A I will answer it directly. Of all that portion from Cañon Creek to Pickenings bar below there is more or less of what has passed over. Over the other there is not, heavy cobble

Q Now I estimate that 10 000 000 cubic yards of cobble stones lie above Rice's Bridge? A Something over 10,000,000

Q About 10 000 000?

A I say something over that

Q Now you say that 75 000 000 yards of material have gone into the river above there from the Gold Run mine alone? A That is so

Q 10 000 000 from the Town Hill mine? A I did not say that

Q Well about?

7000

A I have not examined that subject in regard to Iowa Hill

Q How do you account then for the 75 000 000 Has not that 75 000 000 passed over both plains?

A I accounted for that in my direct testimony I cannot do it any better that I know of

Q How do you account for it now? A In the same manner

Q Do you pretend to say that the flood waters in these mountains do not wash down cobble stones, and not past Rices bridge, not cobble stones that are put in at Canon Creek I claim

Q Put in anywhere?

A It depends on the size of them. In these surface washings there were some big cobble stones very small though that perhaps

cobble stones would be the proper term to use for them but that is not what I mean by cobble stones

Q Don't you know that the Waters freshets are strong enough to move down rocks weighing a ton?

A I know they are not. Not down the river at Rice's bridge It is at Pickerings Bar to the mouth of Cannon Creek

Q I mean then at any place?

A Here it is

Q I mean any place above the mouth of the middle fork at Rice's bridge or at any place from Rice's bridge down to the Middle fork? A Cobble stones that weigh a ton will not be moved a considerable distance any where?

Q They have got over the plain from Cannon Creek to Pickerings Bar haven't they? A I had moved them there

7002

A That is not a plain by any means

Q That is only 30 feet grade in places?

A From Cumm Creek to Pickerings Bar

Q Yes sir Any place

A I claim it is a very large amount per that I estimate too at 6 miles to the rod

Q You stated awhile ago that you heard Wren give the maximum at 55 and the minimum at 35?

A not from Cumm Creek to Pickerings Bar

Q Then from Cumm Creek to Pickerings Bar?

A No sir That is not so I did not testify to that, and as a matter of fact I think he did not make any such survey

Q Then whatever that grade is all these obstructions have passed

over it ?

Whatever that grade is cobble stones coming from the Gold Run mine have passed over it I think

Q You say that you have seen them come down from the Iowa Hill mine weighing how much?

A I did not say that I had seen them coming down from the Iowa Hill mine at all.

(Recess until tomorrow morning at 9.30 Am.)